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ABSTRACT

The guide is intended for teachers of profoundly retarded and severely multiply handicapped children in California. It suggests relevant methodologies and media for such children as well as sample curricula for use in Development Centers for Handicapped Minors and state and private institutions. The major portion of the document consists of instructional plans which provide examples of activities and programs in specific curriculum areas and which are intended as guides to curriculum planning. Major areas covered are ambulation, stimulation, communication, self help skills, imitation, and behavior problems (self destructive behavior, aggression, and blindism). Each instructional plan states objectives, prerequisites, instructional methods, and learning activities, and is followed by a critical commentary identifying strong points and difficulties perceived in the plan. A final section discusses theoretical considerations involved in a philosophy of curriculum planning for Development Centers. (KW)

JUNE 1971

A GUIDE FOR THE INSTRUCTION AND TRAINING OF THE PROFOUNDLY RETARDED AND SEVERELY MULTI-HANDICAPPED CHILD

IN COOPERATION WITH

THE STATE DEPARTMENT OF EDUCATION
DIVISION OF SPECIAL EDUCATION

BUREAU OF EDUCATIONAL IMPROVEMENT
FOR THE HANDICAPPED

STATE OF CALIFORNIA

UNIVERSITY OF CALIFORNIA EXTENSION
UNIVERSITY OF CALIFORNIA AT SANTA CRUZ

JUNE 1971

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Richard D. Struck, M.A.
Project Director
Project Number 44-3000-0507/041

FORE

The Santa Cruz County Board of Edu
opportunity to provide an educational and
California who teach profoundly retarded a
The Santa Cruz Development Center program
for exceptional children. The establishme
concern of this community for meeting the
of this strong commitment that the county
tion for ESEA Title VI funds to conduct th
institutes.

FOREWORD

anta Cruz County Board of Education and I take pride in having an
o provide an educational and training program for teachers throughout
o teach profoundly retarded and severely multi-handicapped children.
z Development Center program is an important addition to our services
al children. The establishment of this program reflects the deep
is community for meeting the needs of the handicapped. It was because
g commitment that the county Board of Education approved our applica-
Title VI funds to conduct three training and curriculum development

RICHARD R. FICKEL, Superintendent
Santa Cruz County Office of Education
Santa Cruz, California

The preparation and publication
commitment of hundreds of people. As a
1,600 profoundly retarded and severely m
Centers, as well as in state hospitals a
They toil a very hard day and endure a l
a select child--for they serve the most
handicapped.

While the Development Centers fo
interim placement for children who were
awaiting placement in one of the State H
of the public school system in the State
witnessed the growth and development of
This success has led to several major de
profoundly retarded and the severely mul

Last year (1970), the D.C.H.M. p
of Education's Bureau of Mentally Except
Exceptional Children, in recognition of
function as they do because of a physica
After a study of the needs of the severe
our State Hospitals, Assemblyman Frank I
the establishment of four pilot programs
disordered" child. What is most signifi
role of Development Centers as being bes
population of children.

The State Advisory Board for D.C
cooperation of the State Department of M
Education in conducting a cooperative re
behavioral characteristics which identif
development in a D.C.H.M. program. This
all children in State Hospitals for the
children enrolled in D.C.H.M. programs.

PREFACE

preparation and publication of this Guide represents the dedication and
of hundreds of people. As a professional group, those who serve the some
undly retarded and severely multi-handicapped children in our Development
well as in state hospitals and private institutions, are very unique.
very hard day and endure a long year. By their own admission, they serve
ild--for they serve the most severely mentally, behaviorally, and physically
.

le the Development Centers for Handicapped Minors were initiated as an
cement for children who were not eligible for existing programs or were
acement in one of the State Hospitals, they have become a viable component
ic school system in the State. In ten short years, (since 1961), we have
he growth and development of children enrolled in the D.C.H.M. programs.
s has led to several major developments in the area of service to the
retarded and the severely multi-handicapped.

t year (1970), the D.C.H.M. program was shifted from the State Department
n's Bureau of Mentally Exceptional Children to the Bureau of Physically
Children, in recognition of the fact that some D.C.H.M. children may
they do because of a physical impairment rather than a mental deficiency.
dy of the needs of the severely emotionally disturbed children in one of
ospitals, Assemblyman Frank Lanterman introduced legislation calling for
shment of four pilot programs to serve what he referred to as the "mentally
child. What is most significant is that he identified in his bill the
elopment Centers as being best suited to serve this potentially large
of children.

State Advisory Board for D.C.H.M. programs requested, and received the
of the State Department of Mental Hygiene and the State Department of
n conducting a cooperative research project aimed at identifying those
characteristics which identify a potential for each child's growth and
in a D.C.H.M. program. This study, when completed in 1971, will include
n in State Hospitals for the profoundly retarded, as well as over 350
rolled in D.C.H.M. programs.

In September 1970, the Santa Cruz County Of
Title VI-B Federal grant to develop a system of org
tional chil ren. This will be a three-year project
ioral characteristics of all handicapped children,
delivery a system for accountability and organizati
study by the prime contractor for this project, the
the profoundly retarded and the severely multi-hand
which relates to this population will be published

Looking ahead, one can expect to see an imp
of those behavioral characteristics which best desc
profit by enrollment in D.C.H.M. programs. We can
diagnostic instruments and techniques. Instruction
will be more clearly defined and individualized. T
for the most effective distribution of funds, for s
trative accountability. Finally, we can look forwa
of funding priorities based upon a prescribed asses
turing of the Education Code and California Adminis
the appropriate goals and objectives for the D.C.H.

RICHARD I
Programs
and Adult

---

1 V.O.R.T. stands for Values, Objectives, Resourc

eptember 1970, the Santa Cruz County Office of Education was awarded a ederal grant to develop a system of organization and service for excep- ren. This will be a three-year project aimed at identifying the behav- teristics of all handicapped children, and then developing for service ystem for accountability and organization. The population now under prime contractor for this project, the V.O.R.T. Corporation[1], includes ly retarded and the severely multi-handicapped. The project document s to this population will be published in October of this year (1971).

ing ahead, one can expect to see an improvement in the identification avioral characteristics which best describe children who need and can rollment in D.C.H.M. programs. We can also expect to discover improved nstruments and techniques. Instructional methodologies or strategies clearly defined and individualized. There will be established systems effective distribution of funds, for staff performance and adminis- untability. Finally, we can look forward to a comprehensive reordering riorities based upon a prescribed assessment of needs and the restruc- e Education Code and California Administrative Code, Title 5, to effect ate goals and objectives for the D.C.H.M. child.

RICHARD D. STRUCK, Director
Programs for Exceptional Children
and Adults and Pupil Personnel Services

stands for Values, Objectives, Resources, Time

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1 E.S.E.A. Title VI-B, Project Number

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SECTION I.

INTRODUCTION

The third Santa Cruz Curriculum Development Inst for Handicapped Minors (D.C.H.M.) Programs was held in provide an opportunity for the participants of the 1968 and the 1969 Curriculum Development Institute to revise the profoundly retarded and severely multi-handicapped to the California State Department of Education, Bureau the Handicapped. This document is the product of that relevant methodologies and media for the profoundly ret well as sample curricula for use in development centers and private institutions.

Responsibilities of the Participants

Most of the institute participants were enrolle five days contributed to the production of a conference tionnaire data, participants were assigned to one of fo of curriculum development.[1] (Each group contained appr least one of these people had experience in applying a the Peabody Language Development Kit to a Development C explained the program to the group and demonstrated it bers of the group had experience or even prior knowledg they had at least registered interest in that area of c

Within each week four task forces covered at le additional programs. Preference was given to standardi Language Development Kit and to programs, though unstan training need not covered by an available standardized given to unstandardized programs of special interest.

---

1 A fifth task force area dealing with operant conditi "tailored" behavioral programs operated over the ful

2 A few individuals were invited to make video taped techniques not covered in Task Forces.

A CURRICULUM FRAMEWORK FOR D.C.H.M. PROGRAMS

Santa Cruz Curriculum Development Institute for Development Centers
inors (D.C.H.M.) Programs was held in July, 1970. Its purpose was to
unity for the participants of the 1968 Behavior Modification Institute
iculum Development Institute to revise the 1969 Course of Study for
tarded and severely multi-handicapped and to present a final document
State Department of Education, Bureau of Educational Improvement for
This document is the product of that 1970 conference. It includes
ogies and media for the profoundly retarded and multi-handicapped as
rricula for use in development centers as well as in state hospitals
tutions.

of the Participants

he institute participants were enrolled for one week and within these
uted to the production of a conference report. On the basis of ques-
articipants were assigned to one of four task forces oriented to areas
elopment.[1] (Each group contained approximately 15 participants.) At
e people had experience in applying a specific program, for example,
age Development Kit to a Development Center (D.C.) class. This teacher
gram to the group and demonstrated it for video taping.[2] Not all mem-
had experience or even prior knowledge of the specific program. But
registered interest in that area of curriculum development.

ach week four task forces covered at least one and, as time permitted,
ams. Preference was given to standardized programs such as the Peabody
ment Kit and to programs, though unstandardized, which met a critical
covered by an available standardized program. Consideration was also
ardized programs of special interest.

force area dealing with operant conditioning and the development of
navioral programs operated over the full two weeks.
uals were invited to make video taped demonstrations of special
t covered in Task Forces.

The conference drew unique informat
available in no other "curriculum guide," c
with their personal experiences in applying
tical experience and wisdom were sought. I
from those having practical and meaningful
at the instructional level, even though the
nique in terms of its theoretical frame of
Considerations - "A Philosophy of Curriculu

Contributions at the classroom leve

1. A brief description of the pr
requirements and purchase pri

2. Training and educational back
e.g., could a volunteer house
apply it with little or no he
forward written instructions?

3. Answers to the questions:

   a. Has the program proven of
   populations?

   b. How has it proven of valu
   (Descriptions of characte
   level and physical handic

   c. By what standards has thi
   form of objective index
   improvement measured wit
   are preferred, subjective
   useful.)

4. Any adaptations of a standar
extended its applicability t
a level for the intellectual
be provided with preparatory
adaptations may have been de
e.g., materials with increas
sighted.

conference drew unique information from participants--information
n no other "curriculum guide," catalog, or text. This information dealt
personal experiences in applying curricula to D.C.H.M. populations. Prac-
ience and wisdom were sought. In so doing, useful information was gained
having practical and meaningful experience. They were able to contribute
ructional level, even though they could not meaningfully discuss a tech-
rms of its theoretical frame of reference (see Section IV - Theoretical
ons - "A Philosophy of Curriculum Planning").

tributions at the classroom level included the following:

A brief description of the program, including materials, time requirements and purchase price.

Training and educational background requisite to using the program, e.g., could a volunteer housewife with only a grade school education apply it with little or no help other than that provided by straight forward written instructions?

Answers to the questions:

a. Has the program proven of educational value with what D.C.H.M. populations?

b. How has it proven of value and with what specific groups? (Descriptions of characteristics of students including IQ level and physical handicaps)

c. By what standards has this value been appraised? (While some form of objective index such as standardized tests or behavioral improvement measured within an operant conditioning framework are preferred, subjective or quasi-objective evidence can be useful.)

Any adaptations of a standard program, e.g., the Peabody, that have extended its applicability to D.C.s. A program that starts at too high a level for the intellectual level of a D. C.'s general population, may be provided with preparatory steps that make it eventually useful. Or adaptations may have been developed for specific handicapping conditions, e.g., materials with increased vividness and contrast for the partially sighted.

5. Descriptions of how the p
For example, the Peabody
revisions on the basis of
with the ITPA as an "inde

6. Of necessity, an individu
two training programs in
curriculum area, the task
standardized and unstanda
group's discussions. Suf
programs to permit a pers
make a judgment regarding
D.C. group. For example,
regarding Lovaas' speech

   a. It is applicable to
   who have never spoke

   b. Training beyond that

   c. Training films are a

   d. It is an operant con
   typically utilized f

   e. Training is on a one

7. Revision of the program,
in "A Philosophy of Curr

Following the conference each
pants, especially the volunteer demons
on their final presentation. The lead
part of the discussions for later refe
continuous access to Dr. Thomas Ball,
consultation and advice.

The curriculum units in Sectio
reports of these task forces.

5. Descriptions of how the program was developed and evaluated. For example, the Peabody Language Development Kit underwent revisions on the basis of field tests. Its validity was tested with the ITPA as an "independent" criterion of improvement.

6. Of necessity, an individual task force could cover only one or two training programs in depth. To fill in the gaps for its curriculum area, the task force provided references to other standardized and unstandardized programs not covered during the group's discussions. Sufficient details were provided on these programs to permit a person completely unfamiliar with them to make a judgment regarding their potential usefulness for his own D.C. group. For example, the following points could be made regarding Lovaas' speech program:

   a. It is applicable to young, school-age autistic children who have never spoken;

   b. Training beyond that provided in a manual is required;

   c. Training films are available;

   d. It is an operant conditioning type program which typically utilized food reinforcement;

   e. Training is on a one to one basis, etc.

7. Revision of the program, in terms of the eight questions outlined in "A Philosophy of Curriculum Planning." (See Section IV.)

Following the conference each Task Force leader and the task force partici-specially the volunteer demonstrating the technique, prepared a report based final presentation. The leaders were given the opportunity to tape record the discussions for later reference in developing these reports and had us access to Dr. Thomas Ball, Mrs. Eve Pecchenino and Mr. Robert Mathew for tion and advice.

The curriculum units in Section II are the product of the efforts and of these task forces.

Thomas S. Ball

SECTION II.

INSTRUCTIONAL PLANS

Since the goal of the institute w
for profoundly retarded and severely mult
ment Centers as well as in state hospital
should provide an entry point for anyone
and developing educational activities. T
ence, providing examples of activities ar
"ambulation" may be defined as one releva
ulum guide should provide information req
tasks within programs according to the pu
impairment and an appraisal of the progra
all the major content areas, the teacher
needs of his pupils. And he is probably
frequently developed on this basis.

In this section will be reproduc
developed by conference participants, al
These plans have been edited only minima
errors of interpretation relative to the
Yet, in view of the fact that the partic
week, and in this brief period were requ
program, provide a demonstration of the
report, the results are remarkably good

Leaving the participants contrib
unique opportunity to look at what evolv
develop their own material. By reviewin
into the thought processes and judgments
This kind of "clinical" document is much
consistent by subsequent editing. For v
programs overlapped or nearly duplicated

In the comments that follow each
of the strong points and also some of th
criticism occurs, it is performed in the
for the creative work to be found in eac

Although many teachers confine t
and provide a useful service, they shoul

Since the goal of the institute was to produce a guide to curriculum planning
oundly retarded and severely multi-handicapped children enrolled in Develop-
ters as well as in state hospitals and private institutions, this section
rovide an entry point for anyone faced with the responsibility of planning
loping educational activities. This guide should serve as a practical refer-
oviding examples of activities and programs within specific areas. For example,
ion" may be defined as one relevant area that must be "covered." This curric-
de should provide information regarding the appropriateness of programs and
thin programs according to the pupil's degree of intellectual and physical
nt and an appraisal of the program's effectiveness. Once he has "covered"
major content areas, the teacher may feel prepared to meet the educational
his pupils. And he is probably correct. Reasonably good programs are
ly developed on this basis.

n this section will be reproduced several of the instructional plans
d by conference participants, all of whom worked in small task forces.
ans have been edited only minimally. For this reason, they contain some
t interpretation relative to the application of the classification system.
view of the fact that the participants attended the conference for only a
d in this brief period were required to attend lectures, develop a teaching
provide a demonstration of the program for video taping, and then produce a
the results are remarkably good and a real credit to everyone involved.

Leaving the participants contributions in their original form provides a
pportunity to look at what evolves when teachers take some guidelines and
their own material. By reviewing these documents, some important insights
thought processes and judgments of the teachers themselves can be gained.
d of "clinical" document is much to be preferred to a version made perfectly
nt by subsequent editing. For various reasons, especially the fact that some
overlapped or nearly duplicated others, not all of them are reproduced.

In the comments that follow each plan, an attempt is made to highlight some
trong points and also some of the difficulties perceived in each. Where
m occurs, it is performed in the service of understanding and with due respect
creative work to be found in each contribution, whether published or unpublished.

Although many teachers confine themselves to a step by step method of teaching
ide a useful service, they should be prepared to think beyond it. Therefore,

a second purpose of this institute was to provi
scending the classroom point of entry. An expa
for the profoundly retarded and severely multi-
Development Centers is thus discussed in Sectio

this institute was to provide a series of perspectives tran-
oom point of entry. An expanded philosophy of curriculum planning
retarded and severely multi-handicapped students in California's
is thus discussed in Section IV.

Thomas S. Ball

UNIT 1

AMBULATION

AMBULATI

OBJECTIVE: Stimulate ambulation through the use of reflexive responses.

PREI

INSTRUCTIONAL METHODS

1. To establish a base line of development.
(See Evaluative Tools listed) 1.

2. Place child face down on Bobath ball. Hold firmly by legs just above the knee (not ankles). 2.

3. Roll child forward until head is about seven inches from floor or child reaches out and touches floor. 3.

4. Place child on floor mat in prone position (on tummy). Trainer on floor keeping near child level to establish near eye contact for interpersonal action. Trainer uses toy to attract child's attention and talks to the child. 4.

AMBULATION

: Stimulate ambulation through the use of reflexive responses.

PREREQUISITE(S): Medical clearance for physical activity.

INSTRUCTIONAL METHODS	LEARNING ACTIVITIES
tablish a base line of opment. Evaluative Tools listed)	1. Not applicable.
child face down on Bobath Hold firmly by legs just the knee (not ankles).	2. Child is lying comfortably.
child forward until head is seven inches from floor or reaches out and touches floor.	3. Sudden arm and head extension. Protective reflex elicited.
child on floor mat in prone ion (on tummy). Trainer on keeping near child level to lish near eye contact for personal action. Trainer uses o attract child's attention alks to the child.	4. Child will lift head up to watch toy and to watch trainee's face while he talks. Also, child will reach for toy, thus the child is raising head and shoulders off mat and strengthening neck and trunk muscles. Also the child reaches and grasps objects.

1.

Giving the Denver Development Test. Thirt
month old, unable to sit up or hold head u

3.

Smiles and talking reinforce the movemer
to reach for toy and hold up head.

2.

Development Test. Thirty
to sit up or hold head up.

Using Bobath ball to elicit protective
reflexes--"getting purposeful movement."

4.

ing reinforce the movement
and hold up head.

"Come on sweetheart, reach for the bells."

AMBULATION

NOTE: What follows are responses to the first s
of this guide.

NARRATIVE

1. A program of ambulation through stimulation
tive reflex in an otherwise passive child.
a child usually responds actively to a multi
who is sensitive to the child's needs and re
sphere. As shown here, the program includes
following:
   a. Forward protective reflex
   b. Lateral protective reflex
   c. Head extension
   d. Range of motion
   e. Self-initiated movement
These abilities are basic to a child's furth
affective development. (See page 114 and fo

Materials essential to this unit are listed
Time requirements: One-half hour limit per

2. This program could be used by anyone, a para
vision of either a physical therapist or an

3. The children that could benefit the most fro
most profoundly affected in the area of moto
developmental lag and/or severe motor involv
Thus, they do not experience the sensory-mot

By what evaluative instruments has this been
   a. Cattell Infant Intelligence Scale
   b. Denver Developmental Screening Test
   c. Gross Developmental and Child CAre, D
   d. Preschool Attainment REcord, Edgar A.
   e. Seal Bluff Evaluation Scale
This strategy motivates the staff member to
growth in an objective and exciting way.

AMBULATION

s are responses to the first six questions listed on pages 2 and 3
de.

mbulation through stimulation and active arousal elicits a protec-
an otherwise passive child. Motorically, at about a 4 months level,
y responds actively to a multisensory approach if used by a teacher
ve to the child's needs and responses in an exciting, spirited atmo-
own here, the program includes activities which will elicit the

protective reflex
protective reflex
tension
f motion
itiated movement
s are basic to a child's further psychomotor, cognitive, and
lopment. (See page 114 and following.)

ntial to this unit are listed in the appendix.
nts: One-half hour limit per session, three times daily.

ould be used by anyone, a paraprofessional or parent, with the super-
er a physical therapist or an occupational therapist.

hat could benefit the most from this program are those who are the
y affected in the area of motor development and who, because of
lag and/or severe motor involvement, are without motor control.
not experience the sensory-motor process of learning.

ative instruments has this been appraised:
l Infant Intelligence Scale
Developmental Screening Test
Developmental and Child CAre, Dr. Margaret Jones
ool Attainment REcord, Edgar A. Doll
luff Evaluation Scale
motivates the staff member to measure even very small increments of
objective and exciting way.

4. Adaptations of programs such as Kephart
developed to meet the individual needs
the program to be used, measurements ar
level. The adaptations used include ta
smooth, etc.; balance activities on a b
passive manipulation.

5. This strategy is excellent for "passive
in the arousal and stimulation to "turn
They thus emerge from the present devel
sensory motor level in the eliciting of
sensation or fright trauma interception
Arousal and positive stimulation develo
personal-social relationships for the y
humanizing toward total integration. T
muscle tone in the "flabby child" and t

6. Programs are continually being develope
occupational therapists working with ce
and evaluating. The programs were then
in his state of severe developmental la
gists include the DENVER DST, Seal Bluf
ligence Scale, Edgar A. Doll's Preschoo
Developmental and Child Care Evaluation

ns of programs such as Kephart, Bobath, Rood, and Ayres have been
to meet the individual needs of children. In order to determine
am to be used, measurements are taken of each child's developmental
he adaptations used include tactile stimulations: hot-cold, rough-
tc.; balance activities on a big ball or bolster; brushing; and
anipulation.

tegy is excellent for "passive" helpless children as it can result
ousal and stimulation to "turn on" and "tune in" these youngsters.
emerge from the present developmental level to the next sequential
otor level in the eliciting of prehensile grasp through the startling
or fright trauma interception moving away from their placid immobility.
nd positive stimulation develops trust in the therapist and positive
social relationships for the youngsters as well as organizing and
g toward total integration. This program is also excellent in developing
ne in the "flabby child" and the severely withdrawn child.

are continually being developed and evaluated. Initially, physical and
nal therapists working with cerebral palsied children did the developing
ating. The programs were then adopted for the mentally retarded child
ate of severe developmental lag. Adaptations by educators and psycholo-
lude the DENVER DST, Seal Bluff Evaluation Scale, Cattel Infant Intel-
cale, Edgar A. Doll's Preschool Attainment Record (PAR), and the Gross
ntal and Child Care Evaluation Scale - Dr. Margaret Jones.

INSTRUCTIONAL PLAN -

INSTRUCTIONAL I

1. Describe how this unit will be useful in dea

It leads to an increased repertoire of behav
trust, use of fear-avoidance behavior to el
establishes reflexive activity, a precursor

2. Describe how this unit will be useful in st

Through passive movement, reflexive movemen
positive reinforcement including exciting s
and the use of incentives. The passive, no
situation where reflexes are elicited, crea
manipulation but generalized reflexively by
"mobilized," and in so doing, postural tone
motion.

3. Describe how this unit will contribute to m

Does not directly relate to this unit.

4. Is this unit's theoretical orientation dire

Direct, because we are seeking a reflexive
moment the child "loves" the activity, boun
through his own movements to generate the m

5. Is the unit's theoretical orientation (1) b
(3) eclectic? Explain.

Activation and arousal techniques in a stim
internal coping with a passive child. The
entire process certainly falls within the t
orientation, as per Piaget.

INSTRUCTIONAL PLAN - AMBULATION

INSTRUCTIONAL LEVELS

ow this unit will be useful in dealing with behavioral change.

o an increased repertoire of behaviors, such as establishment of basic
of fear-avoidance behavior to elicit purposeful use of the body. It
s reflexive activity, a precursor to self-initiated movement.

ow this unit will be useful in stimulating action and arousal.

ssive movement, reflexive movement, the multisensory approach, and
einforcement including exciting social stimulation, tactile stimulation
e of incentives. The passive, non-ambulatory child is placed in a
where reflexes are elicited, creating movement that is not passive
on but generalized reflexively by the child. The child becomes
," and in so doing, postural tone is developed as well as a range of

ow this unit will contribute to modeling and imitation.

irectly relate to this unit.

it's theoretical orientation direct or indirect? Explain.

ecause we are seeking a reflexive action. It becomes indirect the
child "loves" the activity, bounces on the ball or the bolster, begins,
s own movements to generate the movement of the ball or bolster.

t's theoretical orientation (1) behavioristic, (2) cognitive, or
ic? Explain.

and arousal techniques in a stimulating environment are used to elicit
coping with a passive child. The sensory-motor training brought into the
ocess certainly falls within the framework of a cognitive theoretical
on, as per Piaget.

6. Describe how the unit provides for t

The skills learned in this unit are
In addition, once the child has made
self-initiated movement, he experien
generates curiosity and initiative a

7. Describe how this unit relates to ot

It relates to and is basic to any fu
ability. Also, it is a necessary de
and self-help areas and is the basis
the foundation for later gross mover
etc., and moving towards a desired c

8. Describe how this unit might be affe
or personality.

This unit would be affected greatly
sensitivity to the child. The instr
the child in prescribed exercises, u
ive action by the child. The instru
motivation for movement. In additio
and participate with her in the trea
fear-avoidance behavior initially, h
reflexes develop and he learns to pr
then encourages the child to engage

NOTE: These evaluative questions are di

he unit provides for the transfer of training.

rned in this unit are transfered to the next developmental level.
nce the child has made the trip from pure reflexive movement to
movement, he experiences a desire to move, to see--in short, he
osity and initiative and a way to explore the world.

his unit relates to other training areas.

and is basic to any further development of the child's motoric
, it is a necessary development for progress in communication
areas and is the basis for later development. This method is
for later gross movement, such as creeping, crawling, sitting,
ng towards a desired object.

his unit might be affected by the instructor's teaching technique
.

d be affected greatly by the instructor's enthusiasm and
the child. The instructor, rather than passively manipulating
prescribed exercises, uses the ball and bolster to elicit reflex-
the child. The instructor furnishes a more efficient method of
movement. In addition, the child learns to trust the instructor
te with her in the treatment. Also, although the child experiences
e behavior initially, he gradually loses this as his protective
lop and he learns to protect himself from falls. The instructor
es the child to engage in self-motivated movement.

ative questions are discussed in detail in Section IV.

AMBUL

EQUIP

36" ball - Montgomery Wards and Abercrombie

Toys for auditory and visual stimulation -
Lakeshore Educational Supplies, C

Bolster - must be made with small, thin mat
made of heavy plastic material wh

Hot and cold wash cloths
Rough and soft toweling
Plastic "toughy" (scouring pad)
2-3 ice cubes wrapped in cloth or directly
Furs
Brush (2 inches) - soft hair, e.g. sable br
Small blanket
8" semi-hard ball for pressure (pressing ag
Flashlight - lens can be various colors
Mobiles
Carpeting strips of different textures, sha
Therapy mats - Preston Catalog, Trenton, Ne
or
Therapy tables (optional)
Standing, nonbreakable mirrors - Creative
Compressed air - tire pump, hair dryer, toc

AMBULATION

EQUIPMENT

omery Wards and Abercrombie & Fitch - Price $5 to $10

y and visual stimulation - Creative Playthings, Palo Alto -
ore Educational Supplies, Oakland (rattle, bells, etc.)

e made with small, thin mattress that is rolled. The cover is
f heavy plastic material which is sewn over the rolled mattress.

h cloths
oweling
(scouring pad)
apped in cloth or directly on skir

- soft hair, e.g. sable brush

l for pressure (pressing against child)
s can be various colors

s of different textures, shapes and materials
reston Catalog, Trenton, New Jersey

(optional)
akable mirrors - Creative Playthings
tire pump, hair dryer, tooth cleaner

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Basis for Treatment of Dysfunction."
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46, 1, 900-956.

AMBULATION

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an Journal of Physical Medicine, 1967, 46, 1, 732-785.

ley Ann. "An Interpretation of the Approach of Rood to the Treatment
romuscular Dysfunction." American Journal of Physical Medicine, 1967,
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AMBULATIO

SUGGESTED EVALUAT

Denver Developmental Screening Test

Seal Bluff Evaluation Scale

Cattell Infants' Intelligence Scale - Psyche Cattell

Preschool Attainment Record, (PAR) - Edgar A. Doll

Gross Developmental and Child Care Evaluation Scale
(Also: Reflex Maturation Chart
State Postural Control &
Locomotion)

NOTE: Evaluative tools are to assist therap
be considered definitive devices of

AMBULATION

SUGGESTED EVALUATION TOOLS

ental Screening Test	LADOCA Project Publishing Foundation, Inc. E. 51st Avenue & Lancaster Street Denver, Colorado 80216 Also available through any Meade & Johnson's Pharmaceutical Distributor
uation Scale	Seal Bluff Developmental Center 3020 Grant Street Concord, California 94520
Intelligence Scale -	Psychological Corporation 304 E. 45th Street New York, N. Y. 10017
nment Record, (PAR) -	American Guidance Service Minneapolis, Minnesota
ntal and Child Care ale k Maturation Chart Postural Control & otion)	Dr. Margaret Jones University of California, Los Angeles Rehabilitation Building 1000 Veteran's Building 760 Westwood Plaza Los Angeles, California 90024

ve tools are to assist therapists only and are ordinarily not to dered definitive devices of measurement.

FILMS:

Title	
How Babies Learn	New Y Unive
Life With Baby	Detro
Learning in Infancy - Lipsett	Brown
The Bobath Approach to Cerebral Palsy Habilitation	Inter

e

arn

Source

New York University Film Library,
New York City, N. Y. 10001
University of Wisconsin Film Library,
Madison, Wisconsin 53706

Detroit Public Library, 5201 Woodward Avenue,
Detroit, Michigan 48202

nfancy - Lipsett

Brown University, Department of Psychology,
Providence, Rhode Island 02912

proach to Cerebral
itation

Inter Church Audio Visual, 832 Silas Deane
Hiway, Wetherfield, Connecticut 06109
(This film includes the Athetoid and
the Spastic Child)

3

COMMENTS:

Baer, Lovaas and other operant condit
the laborious procedures of shaping by succes
circumvented by prior training in generalize
they have rediscovered procedures developed
not identify it as such, Miss Newcomb demons
a more dramatic alternative to shaping than
range of behaviors is limited, she nonethele
regarding the development of early adaptive
sequentl- interpreted as avoidance condition

Photograph #1 reveals that prior to
flop over on her face if placed in a sitting
angle. In the course of the fall her arms w
when placed on the ball and rolled forward (
mildly fearful situation related to the haza
the forward protective reflex and head exten
procedure involved no shaping by successive
were vigorous, appropriate, and full-blown o
Photograph #3 shows that the elicited adapti
with touch and social stimulation. In photo
tioned forward protective reflex is converte
grasping responses through the use of an att
obtain by reaching

Mary Ann Newcomb's clinically brilli
tation" techniques closely parallels, and ma
by Seguin in his development of prehension t
1907 and Ball, 1971). For this writer, inte
within the context of the Escape-Avoidance c
mere academic exercise. It could serve as t
enhancing collaboration. Especially in term
between an elicited reflex and its conversio
tioners may be able to contribute a great de
of reinforcement procedures, they may be abl
taking place in facilitation training.

COMMENTS: AMBULATION

other operant conditioners have discovered the fact that
of shaping by successive approximations can sometimes be
aining in generalized imitation. Stated more accurately,
rocedures developed by Itard and Seguin. Although she does
Miss Newcomb demonstrated what, for certain behaviors, is
ive to shaping than is generalized imitation Though the
nited, she nonetheless provided an exciting revelation
of early adaptive behavior through what this writer sub-
avoidance conditioning

veals that prior to training this 30 month-old child would
placed in a sitting position with legs extended at a 45°
the fall her arms would hang uselessly at her sides. However,
and rolled forward (photograph #2), the child experienced a
related to the hazard of injury through falling. As a result,
eflex and head extension were suddenly elicited. While this
aping by successive approximations, the postural adjustments
te, and full-blown on the first attempt at elicitation.
the elicited adaptive responses were immediately reinforced
imulation. In photograph #4 we see that the by now condi-
e reflex is converted into purposive, voluntary reaching and
gh the use of an attractive incentive which the child can only

s clinically brilliant application of the Bobath "facili-
ly parallels, and makes use of the same principles employed
ment of prehension through the ladder technique (see Seguin,
or this writer, interpreting Miss Newcomb's demonstration
e Escape-Avoidance conditioning model, is much more than a
It could serve as the point of departure for a mutually
Especially in terms of engineering transitional stages
ex and its conversion to voluntary movement, operant condi-
contribute a great deal. Through the appropriate application
ures, they may be able to accelerate the rate of learning
ation training.

On the other hand, detailed information regarding
ively elicited adaptive responses resides within the field
especially in the work of the Bobaths. Cognitive theorist
could contribute insights regarding the development of suc
generalizations; generalizations that would permit a more
to the environment.

While it is productive to view this demonstration
of Escape-Avoidance conditioning, other significant concom
be ignored. It is obvious, for example, that in the cours
child becomes increasingly responsive to, and "turned on"
around her. In other words, the procedure is a highly eff
activation and arousal. It is quite possible that a sound
fail to even "register," would now be sufficient to make t
the source of the stimulation. Such responses can form th
learning. However, if they do not register, many learning

The reaching and grasping behaviors elicited and r
Newcomb were directly obtained and are important, practica
own right. Beyond this, they have obvious potential for p
training to such areas as self-help skill training. As no
plan, the variable of modeling and imitation does not dire
training unit. In one sense, the category of crisis probl
applied to the child's pre-training state, though somewhat

Even to the casual observer, viewing the video tap
demonstration would reveal the obvious fact that in terms
related to the teacher, the therapeutic success was no les

For further discussion refer to Section IV.

Thomas S

and, detailed information regarding a broad range of reflex-
e responses resides within the field of physical therapy,
of the Bobaths. Cognitive theorists such as Kephart (1960)
hts regarding the development of such responses into motor
alizations that would permit a more flexible adaptive response

oductive to view this demonstration within the perspective
nditioning, other significant concomitant phenomena cannot
ious, for example, that in the course of this training the
ngly responsive to, and "turned on" by what is going on
words, the procedure is a highly effective approach to
. It is quite possible that a sound that previously would
," would now be sufficient to make the child turn toward
ulation. Such responses can form the basis of, or cue new
they do not register, many learning opportunities are lost.

nd grasping behaviors elicited and reinforced by Miss
obtained and are important, practical attainments in their
s, they have obvious potential for positive transfer of
as self-help skill training. As noted in the instructional
modeling and imitation does not directly relate to this
sense, the category of crisis problems might have been
pre-training state, though somewhat tangentially.

sual observer, viewing the video tape produced during this
veal the obvious fact that in terms of subjective factors
, the therapeutic success was no less than inspiring.

scussion refer to Section IV.

Thomas S. Ball

UNIT 2

STIMULATION

Orff-Schulwerk

ORFF-SCHULWERK

OBJECTIVE: To provide an opportunity to participate in a social process using the Orff-Schulwerk method providing an opportunity to creatively participate in a learning situation.

PREREQUI

INSTRUCTIONAL METHODS

1.	Leader chants, "Follow the drum," and a circle (rondo form) is formed.	1. Memb tanc
2.	Leader chants, "Names, names, what's your name?" to initiate the "A" development of the rondo form. She uses eye contact while chanting to encourage participation by all members of the group, and she accents and enunciates the chant.	2. Memb phys
3.	Leader states, "My name is ...," to indicate it is her "turn" in the "B" section of the rondo form. After name is given and mimicked by group, leader returns to "A" of rondo form.	3. Grou nied
4.	Leader repeats "A" and "B" of rondo form until each member has an opportunity for a turn. If member is unable to respond, his period of time (possession), is still given to the individual in silence.	4. Each time sona othe

ORFF-SCHULWERK

ide an opportunity
icipate in a social
using the Orff-
rk method providing
rtunity to creatively
pate in a learning
on.

PREREQUISITE(S): Training in: Orff-Schulwerk method; needs of the handicapped; group dynamics; behavior modification; growth and development.

IONAL METHODS	LEARNING ACTIVITIES
"Follow the drum," ondo form) is formed.	1. Members follow the leader, with assistance if needed.
"Names, names, what's initiate the "A" devel- ondo form. She uses eye hanting to encourage y all members of the accents and enunciates	2. Members participate by chanting and/or physical movement, mimicking the leader.
"My name is ....," to her "turn" in the "B" rondo form. After name micked by group, leader of rondo form.	3. Group repeats teacher's name accompanied by physical movement.
"A" and "B" of rondo member has an oppor- rn. If member is nd, his period of time s still given to the ilence.	4. Each member has a turn which is <u>his</u> time to innovate. This time is a personal possession and is respected by other members of the group.

Orff-Schulwerk (Cont'd.)

INSTRUCTIONAL METHODS

5. Leader states chant, "Make a Fire, Light it, Watch it Grow!" She dramatizes the making of a fire, using a tambour as a symbol of fire, and places the fire in the center of the circle.

5. Each
the f
cente

6. Leader initiates second phase of fire theme with chant, "When you Touch the Fire, it's Very, Very Hot! When you Touch the Fire, it Burns!" Leader approaches fire dramatically and carefully touches fire, and reacts as if burned. Spontaneous comments about fear, excitement, concern, pain are reinforced when offered by members.

6. Rondo
devel
the

7. Leader chants, "When the fire is very, very hot, you blow the fire out!" She encourages each member to join together and blow the fire out. Chanting, "The fire's out, the fire is out, we've all blown it out!" The tambour is removed from the circle.

7. All
of c

8. Leader claps and chants, "Stand up! Stand up! Stand up in a circle!"

8. Memb

9. Leader explains the sounds of the body by asking, "What sounds does your body make? What sounds do your toes, feet, etc. make?" Spontaneously encouraging participants to explore and pointing out interesting sounds.

9. Memb
with

10. Leader begins nonverbal foot stamping and hand clapping in a pattern to establish "A" of the rondo.

10. Memb
sour

k (Cont'd,)

STRUCTIONAL METHODS		LEARNING ACTIVITIES
ates chant, "Make a Fire, Watch it Grow!" She drama- making of a fire, using a s a symbol of fire, and places in the center of the circle.	5.	Each member innovates while lighting the fire in the tambour placed in the center of the circle.
itiates second phase of fire h chant, "When you Touch the s Very, Very Hot! When you Fire, it Burns!" Leader s fire dramatically and care- ches fire, and reacts as if Spontaneous comments about itement, concern, pain are d when offered by members.	6.	Rondo form continues with continuous development of dramatic approach to the fire, imitating the leader.
ants, "When the fire is very, you blow the fire out!" She s each member to join together the fire out. Chanting, "The t, the fire is out, we've all out!" The tambour is removed circle.	7.	All members chant and come to the center of circle and blow out the fire (tambour).
aps and chants, "Stand up! Stand up in a circle!"	8.	Members stand up and form a circle.
plains the sounds of the sking, "What sounds does make? What sounds do your t, etc. make?" Spontaneously ng participants to explore ing out interesting sounds.	9.	Members express individual body sounds <u>without</u> taking turns in rondo form.
gins nonverbal foot stamp- and clapping in a pattern ish "A" of the rondo.	10.	Members take turns developing body sound "B" development.

Orff-Schulwerk (Cont'd.)

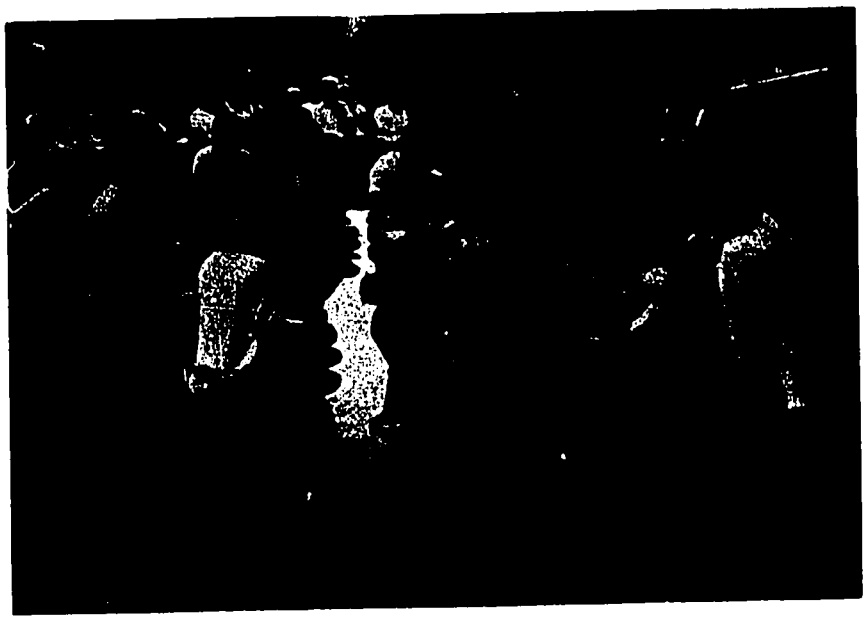
INSTRUCTIONAL METHODS

11.	Leader chants and motions as she slowly lowers body to floor, "Let's all sit down," (while lowering her voice).	11. Me
12.	Leader places a bass xylophone, an alto metalophone, and a regular xylophone in the center of the circle. Leader chants, "There are many sounds you hear, play your sounds for us." "Who will play?" The leader encourages voluntary participation rather than having the children take turns in the order of the circle.	12. Or er se me
13.	Leader chants, "Choose a friend to play with you, choose a friend by name."	13. Th ar hi sc
14.	Leader chants, "Choose another friend to play with you, choose a friend by name." Leader encourages listening to each other and the composition in three parts is developed.	14. A to
15.	Rondo continues until there are no volunteers. If member seems interested but does not seem to understand the format, the leader encourages participants and provides needed assistance. The leader sometimes asks another member to assist. When group does not draw composition to closure, she says "thank you" in a firm and final tone of voice.	15. Al pa
16.	Leader chants, "The time has come to go, the time has come to go," and leads the members from the room.	16. Me go in

d.)

NAL METHODS	LEARNING ACTIVITIES
d motions as she slowly loor, "Let's all sit wering her voice).	11. Members sit down, forming a circle.
bass xylophone, an alto a regular xylophone in e circle. Leader chants, sounds you hear, play your "Who will play?" The s voluntary participation ng the children take turns the circle.	12. One member volunteers to play and enters the center of the circle, selecting one of the three instruments.
Choose a friend to play a friend by name."	13. The member in the circle chooses another person to play with him, using his name if able, and the second person chooses an instrument.
Choose another friend , choose a friend by ncourages listening to he composition in eveloped.	14. A third member joins the group and together they develop a composition.
until there are no vol- ber seems interested m to understand the er encourages partici- es needed assistance. imes asks another mem- When group does not draw losure, she says "thank nd final tone of voice.	15. All members have an opportunity to participate.
The time has come to come to go," and leads the room.	16. Members leave room with spontaneous good-byes, so long - bye-bye, singing and chanting... and aroused.

1. The leader develops chant for leading group into the room. Group forms circle. Group performs rondo in chant, "Names, names, what's your name?"



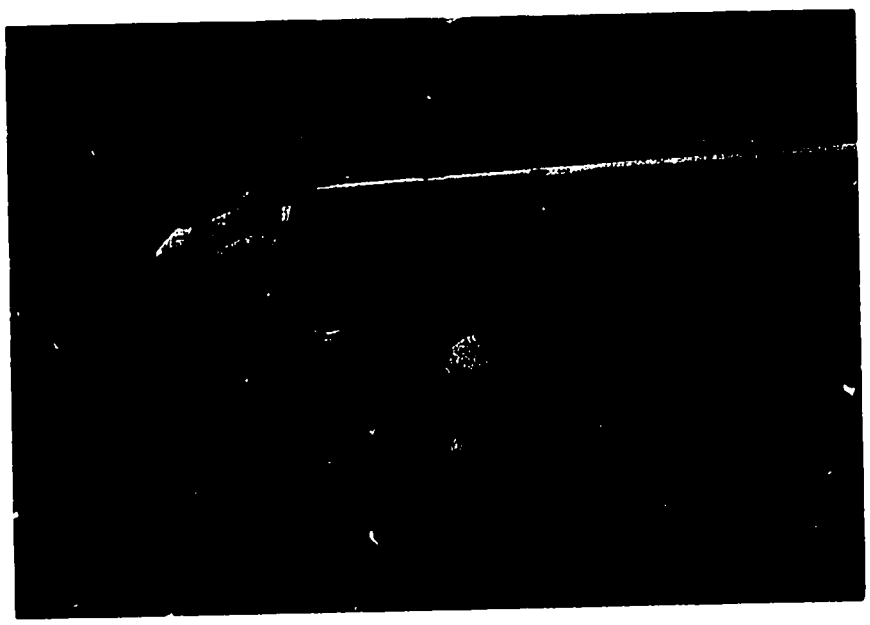
Group of nine children entering room for first Orff-Schulwerk session.

PLAN: Orff-Schulwerk

ops chant for
to the room.
le. Group per-
hant, "Names,
ur name?"

2. Leader develops theme on fire. Leader places tambour in center of circle and chants, "Make a fire, light it, watch it grow." After participation, leader chants, "When the fire is very, very hot, you blow the fire out." All blow the fire out together.

hildren entering room
Schulwerk session.



The children are encouraged to innovate and use imagery in making the fire in the tambour.

PLAN: Orff-Schulwerk (Cont'd.)

3. Leader has group stand and participate in exploring the sound of the body. After exploration a nonverbal clap and stamp "A" of rondo is developed, and the members innovate with body sound in response for development of "B" of rondo.

The teacher encourages the group to listen to various sounds made with their body.

4. Group partici
"There are ma
your sounds f
has the choic
Leader chants
play with you
A friend is c
selected by t
chants, "Choo
with you, cho
third friend

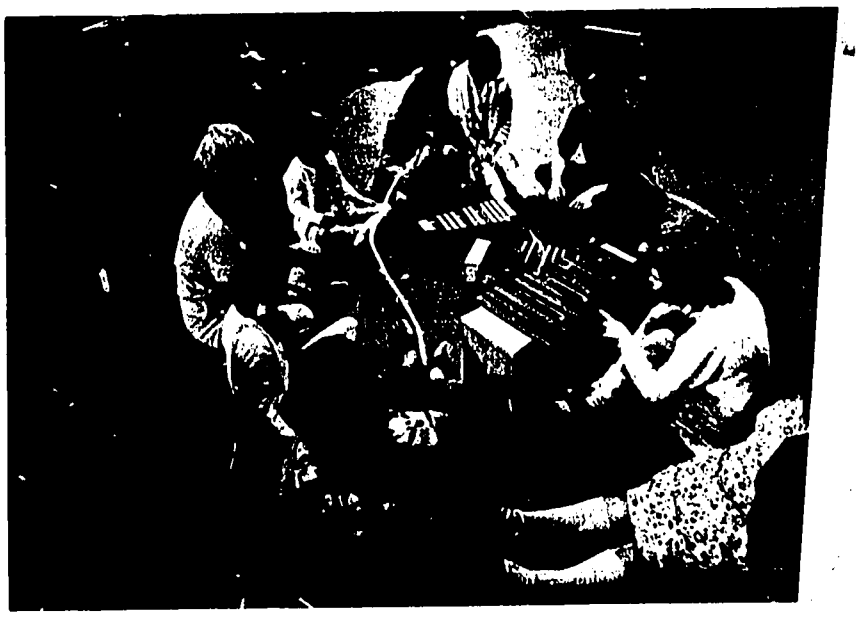
The children
each other an
together.

chulwerk (Cont'd.)

s group stand and partici-
xploring the sound of the
ter exploration a nonver-
and stamp "A" of rondo is
, and the members innovate
sound in response for
nt of "B" of rondo.

ier encourages the group
to various sounds made
r body.

4. Group participating in rondo chant, "There are many sounds you hear, play your sounds for us." The participant has the choice of three instruments. Leader chants, "Choose a friend to play with you, choose a friend by name." A friend is chosen and an instrument selected by the friend. The leader chants, "Choose another friend to play with you, choose a friend by name. The third friend plays with the other two.



The children are encouraged to listen to each other and to develop a composition together.

PLAN: Orff-Schulwerk (Cont'd.)

Orff

chulwerk (Cont'd.)

Orff Activities

NARRATIVE[1]

Orff-Schulwerk is a creative process whic
participation in the process. The process is mor
cerns itself with the complexities of the body, t
common to man. It is concerned with calling out
communication.

Orff-Schulwerk is improvisation. Individ
becomes a self motivating power in performance.
success in self-expression. Orff-Schulwerk is a
first an activity of the mind with subsequent man
Orff-Schulwerk, in dealing always with total expr
taking speech patterns and gesture for basic mate
words of meaning, but can be nonsense sounds or s
finger snapping, stamping, and patschen (clapping
serve as an extension of sound made by the body a
patterns more than melodic. Melody grows out of
children's play and children's calls.

A principle of Orff-Schulwerk is to start
stimulating the child's total pre-disposition to
other specialization can be built upon this broad

Feedback is immediate through acceptance
contribution and participation in Orff-Schulwerk
level of inner job will vary according to his inn
pation with the group including self-expression.
belief in himself and his expression cannot be de
"right" or "wrong." His unique contribution shou
and the criteria, by which it is accepted, or mod
ceive, such as through listening, looking, and en

---

1 This material describing Orff-Schulwerk is tal
Creativity," a report to the U. S. Office of
Bellflower Unified School District, Bellflowe

reative process which involves every child through
The process is more than a musical method, it con-
ities of the body, the spirit, and deepest feelings
ed with calling out all possible forms of fruitful

rovisation. Individual awareness to active procedure
ver in performance. Orff-Schulwerk is a step-wise
Orff-Schulwerk is a rhythmic education. Rhythm's
with subsequent manifestation in sound and movement.
ways with total expression, is natural and alert in
esture for basic material. Ideas are not necessarily
nonsense sounds or sounds of gesture like clapping,
nd patschen (clapping of hands on thighs). Instruments
nd made by the body and continue first as rhythmic
Melody grows out of natural sounds commonly heard in
's calls.

Schulwerk is to start education by utilizing and
l pre-disposition to express himself so that any
built upon this broad and solid basis.

e through acceptance or modification of each persons
on in Orff-Schulwerk group design. The individual's
according to his inner feelings of success in partici-
ing self-expression. The reinforcement of the child's
xpression cannot be done in terms of telling him he was
ique contribution should receive consideration each time,
it is accepted, or modified, be within terms he can per-
ening, looking, and empathy for a particular feeling.

Orff-Schulwerk is taken from "orff-Schulwerk Design for
the U. S. Office of Education of ESEA Title III Project,
l District, Bellflower, California, 1968.

STIMULATION: ORFF-S

INSTRUCTIONAL LI

1. Describe how this unit will be useful in dea

It allows channeling of unacceptable behavio
Respect for self and others is inherent in t
unit can be non-verbal and adapted to the le

2. Describe how this unit will be useful in sti

Multi-stimuli are used. The teacher and stu
through involvement and mutual stimulation, a

3. Describe how this unit will contribute to mo

Development of a theme in rondo form is imit
responses demonstrate modeling. The social
model to which the individual can relate in a
the social process is reinforced. Orff-Schu
modeling of other experiences (i.e., school,

4. Is this unit's theoretical orientation direc

In planning an Orff-Schulwerk session a plan
behavior is made, indirectly, but once the s
tion becomes direct in response to the obse

5. Is the unit's theoretical orientation (1) be
eclectic? Explain.

Eclectic. The process includes learning th
techniques, group dynami s and cognitive le

STIMULATION: ORFF-SCHULWERK

INSTRUCTIONAL LEVELS

this unit will be useful in dealing with behavioral change.

anneling of unacceptable behavior and rewards for approproate behavior.
self and others is inherent in the structure of Orff-Schulwerk. This
non-verbal and adapted to the level of behavior.

this unit will be useful in stimulating action and arousal.

i are used. The teacher and student(s) are co-authors of the unit and
vement and mutual stimulation, arousal and action is accomplished.

this unit will contribute to modeling and imitation.

of a theme in rondo form is imitative and the individual's innovative
monstrate modeling. The social process in Orff-Schulwerk provides a
n the individual can relate in any group situation. Contributing to
rocess is reinforced. Orff-Schulwerk provides an opportunity to test
other experiences (i.e., school, home, play yard, church, etc.).

's theoretical orientation direct or indirect?

an Orff-Schulwerk session a plan of action in handling anticipated
made, indirectly, but once the session begins the theoretical orienta-
direct in response to the observable behavior.

s theoretical orientation (1) behavioristic, (2) cognitive, or (3)
xplain.

he process includes learning theory, behavior theory, encounter
group dynamics and cognitive learning.

6. Describe how the unit provides for the transfer

The following transferable areas are reinforced to the situation; developing use of descriptive respect for equipment; sensitivity to sounds ar properties of instruments; increased attention attitudes; knowledge of basic concepts; and mos enjoyment while learning.

7. Describe how this unit relates to other traini

The adaptation of this unit is only limited by (i.e., grooming, self-care, motor coordination etc.). The structure of Orff-Schulwerk is appl

8. Describe how this unit might be affected by the or personality.

The instructor should have the following qualit involved and must enjoy the activity. She must each individual's innovative response. She mus and exhibit spontaneity. She should lack inhil and to provide a model. She should be resource tools for theme development, be knowledgeable capable of structuring a functional activity.

he unit provides for the transfer of training.

transferable areas are reinforced: independent responses appropriate
on; developing use of descriptive resources (verbal/non-verbal);
uipment; sensitivity to sounds and the knowledge of the physical
instruments; increased attention span and retention; appropriate
wledge of basic concepts; and most of all experiencing fun and
e learning.

his unit relates to other training areas.

of this unit is only limited by the imagination of the teacher
g, self-care, motor coordination, verbal skills, arts and crafts,
ructure of Orff-Schulwerk is applicable in any learning situation.

his unit might be affected by the instructor's teaching technique
.

should have the following qualities: She/he must be capable of being
ust enjoy the activity. She must respect and be capable of developing
l's innovative response. She must be sensitive to the group process
ontaneity. She should lack inhibition so as to facilitate interaction
a model. She should be resourceful in developing germ statements and
e development, be knowledgeable of the needs of individuals, and be
ucturing a functional activity.

For information on training for Orff-

Mrs. Carol H. B
Program Directo
Social Developm
Fairview State
2501 Harbor Bou
Costa Mesa, Cal

and she will assist you in locating trainers

The University of California at River
Pepperdine College in Los Angeles, San Fernand
have offered courses on Orff-Schulwerk at var

The Department of Mental Hygiene, Bur
has provided training of clinicians across th
providing training in Orff-Schulwerk to inter

MATERI

Glockenspiels
Xylophones
Metallophones

Sources for Orff-Schulwerk instruments includ

Magnamusic-Baton, Inc.
6390 Delmar Boulevard
St. Louis, Missouri 931

Peripole, Inc.
51-17 Rockaway Boulevard
Far Rock Away, New York

Children's Music Center
5373 W. Pico Boulevard
Los Angeles, California

nformation on training for Orff-Schulwerk, contact:

Mrs. Carol H. Bitcon RMT
Program Director
Social Development Program
Fairview State Hospital
2501 Harbor Boulevard
Costa Mesa, California 92626

ssist you in locating trainers by geographical areas.

iversity of California at Riverside, Los Angeles, Irvine, San Diego,
ege in Los Angeles, San Fernando State College, Long Beach State College,
ourses on Orff-Schulwerk at various times.

partment of Mental Hygiene, Bureau of Training, Sacramento, California,
raining of clinicians across the state, and various state hospitals are
ning in Orff-Schulwerk to interested clinicians.

MATERIALS

Glockenspiels
Xylophones
Metallophones
Drums and timpani
Small percussion instruments

ff-Schulwerk instruments include:

Magnamusic-Baton, Inc.
6390 Delmar Boulevard
St. Louis, Missouri 93130

Peripole, Inc.
51-17 Rockaway Boulevard
Far Rock Away, New York 11691

Children's Music Center
5373 W. Pico Boulevard
Los Angeles, California 90019

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ORFF-SCHULWERK

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Musica Poetica, Carl Orff and Gunild Keetman, HM 30

Carmina Burana, LPM 18303 Hi-Fi.

Call and Response, rhythmic group singing, Ella Jen

The Sesame Street Learning Kit.

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LPM 18303 Hi-Fi.

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t Learning Kit.

ren." An infectious exposition of the Carl Orff System of developing
t musical inclinations of children. Filmed at famed Mozarteum School
rg, the film demonstrates how easily the natural rhythms of childhood
aster of complicated harmony. Produced by the National Film Board of
(Code 407022 - 13 minutes - Black & White, rental $6.00)

rce information available from Carol Bitcon (see page 27).

COMMENTS: Orff-S

Just as the interpretation of Miss Newc
of escape-avoidance yielded new insights into t
that technique, so also is the significance of
within the framework of generalized imiation.

Frequent references to imitation were m
there is a vast difference between imitation, a
imitation, a concept rediscovered, developed an
and others in the field of operant conditioning
generalized imitation will be clarified and a p
dure will be provided.

Generalized Imitation: It is important
technical from the popular meaning of i
and Sherman (1964) pointed out that a m
behavior of a model does not guarantee
the two behaviors was functional in pro
the observer. This is a subtle but cri
example, if a little boy sees his fathe
sing a lever on a vending machine and d
say that he learned that pressing a lev
reward. The presence of the father, pe
essary. The child might have witnessed
automatically, as by an invisible opera
response. On the other hand, if the ch
the father's idiosyncratic gestures, hi
absence of any overt attempt to encoura
duplications, we see generalized imitat
because it has become intrinsically rew
Stated more formally, imitation occurs
responses of a model are copied in dive
the absence of extrinsic reinforcement"
1968, p. 375).

COMMENTS: Orff-Schulwerk

he interpretation of Miss Newcomb's facilitation programs in terms
ce yielded new insights into the significance and potentialities of
o also is the significance of Orff-Schulwerk more fully appreciated
ork of generalized imiation.

references to imitation were made in the instructional plan. Yet
ifference between imitation, as casually understood, and generalized
ept rediscovered, developed and conceptually refined by Baer, Lovaas
field of operant conditioning. In what follows, the concept of
tion will be clarified and a practical example of a training proce-
ided.

ed Imitation: It is important to differentiate the
from the popular meaning of imitation. Thus, Baer
an (1964) pointed out that a mere repetition of the
of a model does not guarantee that the similarity of
ehaviors was functional in producing the behavior in
ver. This is a subtle but critical distinction. For
if a little boy sees his father obtain candy by pres-
ver on a vending machine and does likewise, we can only
he learned that pressing a lever led to a tangible
The presence of the father, per se, was perhaps unnec-
The child might have witnessed the sequence carried out
ally, as by an invisible operator, and learned the
On the other hand, if the child begins to duplicate
r's idiosyncratic gestures, his gait, etc., in the
f any overt attempt to encourage or reward these
ons, we see generalized imitation. The child imitates
t has become intrinsically rewarding to "be like dad."
re formally, imitation occurs "when many different
s of a model are copied in diverse situations, often in
nce of extrinsic reinforcement" (Gewirtz and Stingle,
375).

COMMENTS (Cont'd.)

The effectiveness of imitation training
ing was clearly revealed in a study by B
(1967), who worked with profoundly retar
neous imitative behavior, either vocal o
food as reinforcement, they taught the c
e.g., raising the left arm, putting on a
prior demonstration by an experimenter.
through successive approximations and fa
matching of the experimenter's responses
subjects began spontaneously imitating n
first having to be trained. While most
tions were reinforced, some were not. R
called "probes," persisted as long as so
were reinforced. Verbal imitations were
patterns of motor imitations, e.g., in c
menter said, "Do this," rose from his ch
the room, turned toward the subject, sai
seat. The result was that a generalized
tially achieved on a motoric-gestural le
subsequent verbal learning, i.e., childr
sounds prior to training, imitated the e
"Ah." (Ball, 1967.)

In contrast to the laborious and relativ
developed by Baer, Carol Bitcon's adaptation of
itively incorporated what appears to be a series
generalized imitation.[1] In addition to the uniq
form, unlike the Baer technique, the Orff method
training and the promotion of activation and arc
methodology, it recaptures the subtleties of imi
Seguin (1907). Thus,

> Imitation is first induced by the concer
> tion from the teacher to the child... I

---

1 A research investigation, currently in progr
technique for training generalized imitation

iveness of imitation training in facilitating other learn-
early revealed in a study by Baer, Peterson and Sherman
o worked with profoundly retarded children without sponta-
ative behavior, either vocal or motor. Selectively using
inforcement, they taught the children a series of responses
ing the left arm, putting on a hat, etc., identical to a
nstration by an experimenter. Initially, intensive shaping
ccessive approximations and fading was required to induce a
f the experimenter's responses. Gradually, however, the
egan spontaneously imitating new responses without their
ng to be trained. While most of these spontaneous imita-
reinforced, some were not. Responding to the latter items
obes," persisted as long as some other imitative responses
orced. Verbal imitations were then incorporated into the
f motor imitations, e.g., in one demonstration the experi-
d, "Do this," rose from his chair, walked to the center of
turned toward the subject, said "Ah," and returned to his
result was that a generalized tendency to imitate, ini-
ieved on a motoric-gestural level, markedly facilitated
verbal learning, i.e., children who would not imitate
or to training, imitated the entire sequence, including
11, 1967.)

t to the laborious and relatively stilted procedures methodically
Carol Bitcon's adaptation of the Orff-Schulwerk method has intu-
ed what appears to be a series of powerful techniques for developing
ion.[1] In addition to the uniquely facilitating effect of the rondo
aer technique, the Orff method exploits the possibilities of group
romotion of activation and arousal. In its extensions beyond Baer's
captures the subtleties of imitation training incorporated by
us,

is first induced by the concentrated operation of atten-
the teacher to the child... But after any practical

stigation, currently in progress, will formally evaluate Orff as a
raining generalized imitation.

> extension of the imitative faculty is acq
> must be carried from the quiet closet pre
> imitation to the open room where group im
> contagious power...(pp. 90-91).

He adds,

> If the exercise is already quite familiar
> not so much the learning of new gestures,
> more rapid performance of old ones, the c
> on a slightly curved line, the more exper
> extremities of the concavity, each of the
> and the teacher; thus doubly impulsed and

The Baer technique was the method of choi
atic research on generalized imitation. He demon
eralizability of imitation in a more precise and
possible in the Orff context. Yet once such init
is no reason to remain encumbered by a narrow gau

It is important to interpret Orff within
tioning approach to generalized imitation. Speci
to develop a generalized imitation that could sub
type speech training program.[1] Such programs are
fashion. However, the identification of Orff-Sch
imitation might be the first step toward developi

Viewed in terms of the variable, subjecti
very effective. Although, as Mrs. Bitcon has obs
ticipant to analyze or be accountable for feeling

---

1 In comparison with the Baer procedure, a disad
items such as hand clapping (see item 10 of In
context of a specific ongoing activity. The c
by the introduction of the activity. In other
routine, the start of the routine signals the
hand clapping. Using this kind of cue, he cou
without ever paying attention to the leader.
this fashion would not constitute generalized

the imitative faculty is acquired, this acquisition
ed from the quiet closet prepared for individual
the open room where group imitation displays its
wer...(pp. 90-91).

se is already quite familiar, and has for an object,
he learning of new gestures, as the correction and
erformance of old ones, the children will be arranged
curved line, the more expert at the center and
of the concavity, each of them seeing all the rest
her; thus doubly impulsed and doubly taught.

nique was the method of choice in the initial stages of system-
eralized imitation. He demonstrated the trainability and gen-
tation in a more precise and controlled fashion than would be
context. Yet once such initial studies are completed, there
in encumbered by a narrow gauge training technique.

ant to interpret Orff within the Baer and Lovaas operant condi-
generalized imitation. Specifically, Orff training might serve
ized imitation that could subsequently be exploited in a Lovaas
program.[1] Such programs are not ordinarily linked in this
he identification of Orff-Schulwerk as training in generalized
he first step toward developing novel program configurations.

rms of the variable, subjective factors, Orff may prove to be
hough, as Mrs. Bitcon has observed, it does not force the par-
or be accountable for feelings engendered in the group situation,

h the Baer procedure, a disadvantage to Orff is that imitation
d clapping (see item 10 of Instructional Plan) occur within the
ific ongoing activity. The child's behavior may be cued merely
on of the activity. In other words, because he has learned the
t of the routine signals the fact that the time has arrived for
sing this kind of cue, he could carry out the appropriate response
ing attention to the leader. But hand clapping brought about in
d not constitute generalized imitation.

COMMENTS (Cont'd.)

like the Esalen-type encounter group it can "turn on" all par
student alike. In fact, it is the virtue of Orff that the te
dissolves during the Orff process. This means that the stude
at least potentially, can become part of what is an existenti
for the teacher. The retardate's naive yet joyful spontanity
therapeutic sense, help an "uptight," intellectually oriented
own spontanity. In practical terms, this means that the reta
become reinforcing to the therapist as a human being, thereby
possible motivation for working with the retarded. It appear
in the field of mental retardation never bridge this interpe
selves and their students.

For additional discussion, refer to Section IV.

nter group it can "turn on" all participants, teacher and
t is the virtue of Orff that the teacher-student distinction
process. This means that the student participates in and,
become part of what is an existentially enhancing experience
rdate's naive yet joyful spontanity may actually, in a
"uptight," intellectually oriented adult to express his
cal terms, this means that the retarded individual may
therapist as a human being, thereby establishing the best
rking with the retarded. It appears that many professionals
ardation never bridge this interpersonal gap between them-

scussion, refer to Section IV.

UNIT 3

COMMUNICATION

INSTRUCTIONAL METHODS

7. "____, Do you see a picture of a bunny?" etc. (Give each child a chance to select picure.)

8. "Let's put the bunny in his box." (Place bunny in box. Invite student's help.)

9. "____, What else is in the box? What is it?" etc. (Follow the same procedure as with rabbit.)

10. "Can you show me the picture of a bunny?"

11. "____, Would you like to put the turtle in the box?" "Let's close the box."

NSTRUCTIONAL METHODS

you see a picture of a
c. (Give each child a
select picure.)

the bunny in his box."
ny in box. Invite
help.)

t else is in the box? What
c. (Follow the same proce-
th rabbit.)

how me the picture of a

ld you like to put the
the box?" "Let's close

LEARNING ACTIVITIES

7. To draw individual's attention to the learning activity. Child looks at pictures and selects appropriate picture by pointing or picking it up.

8. To conclude one learning process. Eliminate distraction during succeeding lesson.

9. Initiation of new object lesson.

10. Review of preceding object lesson.

11. Conclusion of object lesson.

1.

Gaining attention of children

2.

Gaining recognitio of object

"Who knows what is in the box?"

3.

Children look at pictures and select appropriate picture

4.

Associati of object and pictu

"Maybe we will see a picture of a bunny."

what is in the box?"

2.

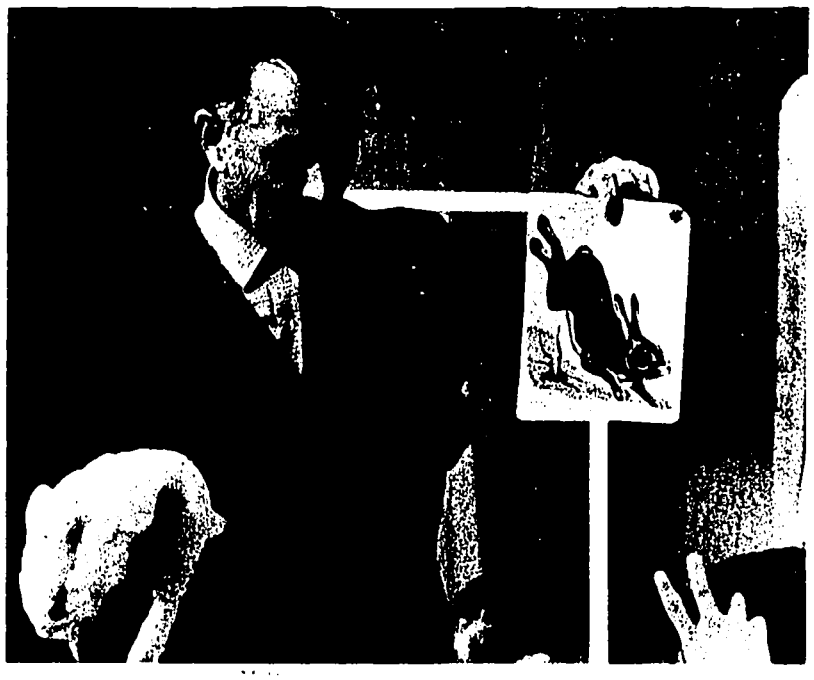
Gaining recognition of object

"What is this?"

picture of a bunny."

4.

Association of object and picture



NARRATIVE

In working with retarded children, it is
that are concrete, motivating, stimulating, and r
provide for some transfer of learning in a situat
rewarding.

The objective of this presentation was to
turtle and rabbit) to arouse the children's visua
awareness. It was hoped to have them identify ar
lating them and, in imitation of their teacher, r

Finally, the children were to select the
the pets presented to them from the Peabody Kit.

vith retarded children, it is essential to provide experiences
notivating, stimulating, and meaningful--experiences that will
ansfer of learning in a situation that is both enjoyable and

ve of this presentation was to present concrete objects (the
to arouse the children's visual, auditory and kinesthetic
noped to have them identify and name the animals while manipu-
imitation of their teacher, repeatedly naming them.

e children were to select the appropriate picture likeness of
to them from the Peabody Kit.

COMMUNICATION: WOR

INSTRUCTIONAL

1. Describe how this unit will be useful in d

This unit hopes to help the child associat
a word or symbol (picture). Next step, th
associating a picture or object with a spo
ing the object by name.

2. Describe how this unit will be useful in s

The use of live animals is effective in ar
although there is the possibility that son
touch and feed the animals uses additiona

3. Describe how this unit will contribute to

The teacher says the name of the animals.
tunity to repeat the name. They are also
saying "Good-bye" to the animals.

4. Is this unit's theoretical orientation di

Direct. The objects as well as pictures
The intent is to learn the words for thes

5. Is the unit's theoretical orientation (1)
(3) eclectic? Explain.

Eclectic. Although the language is basic
the animals, is used as a means of teachi

COMMUNICATION: WORD ASSOCIATION

INSTRUCTIONAL LEVELS

w this unit will be useful in dealing with behavioral change.

pes to help the child associate a real or live (rabbit) object with
mbol (picture). Next step, the child would develop the concept of
a picture or object with a spoken word demonstrating this by identify-
ect by name.

w this unit will be useful in stimulating action and arousal.

live animals is effective in arousing interest in young children
ere is the possibility that som· may be fearful. Permitting them to
eed the animals uses additional senses and involves the child further.

w this unit will contribute to modeling and imitation.

says the name of the animals. The children are then given the oppor-
epeat the name. They are also encouraged to imitate the teacher in
d-bye" to the animals.

t's theoretical orientation direct or indirect? Explain.

e objects as well as pictures of the objects to be identified are used.
is to learn the words for these objects.

's theoretical orientation (1) behavioristic, (2) cognitive, or
c? Explain.

Although the language is basically cognitive, action, such as handling
, is used as a means of teaching words.

6. Describe how the unit provides for the transfe

The children will learn that there is a word c

7. Describe how this unit relates to other traini

This unit is related to socialization, such as
It would be a step toward further language dev

8. Describe how this unit might be affected by th
or personality.

The teacher would need to be interested in ani
in bringing children and animals together. Th
amount of equanimity.

ow the unit provides for the transfer of training.

en will learn that there is a word or name for objects.

ow this unit relates to other training areas.

is related to socialization, such as taking turns and care of animals.
e a step toward further language development.

ow this unit might be affected by the instructor's teaching technique
lity.

r would need to be interested in animals and to be gentle and patient
g children and animals together. The process may require a certain
equanimity.

Word Association (Cont'd.)

Equipment List

1 table
4 chairs
1 standing mirror
1 Peabody Kit #P
Pictures of Ball, Bunny, Turtle

Supplies List

Ball
Turtle (live)
Rabbit (live) and food
Boxes
Signs

Bibliog

See com

Evaluat

1. Pre
2. Der
3. Enc
   EXI
4. Ter

ion (Cont'd.)

t

rror
#P
all, Bunny, Turtle

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See combined list for COMMUNICATIONS.

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and food

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2. Denver Development Scale.
3. Engel's Book on LANGUAGE MOTIVATING EXPERIENCES - Evaluative Scale.
4. Tentative Guide (Last Years).

COMMENTS: Word As

This instructional plan is extremely cl
ligently interpreted in terms of the eight ques
Levels). It is important to note that this pro
the Peabody Kit. There appears to be a real ne
profoundly retarded and severely multi-handicap

More than anything else, activation and
child to the outside world. If this can be don
with a sense of the dramatic and of sheer disco
the Orff section, experiences of this kind can
included. Here the emphasis is on spontaneity

A highpoint of the demonstration occurr
rabbit to some of the children enrolled in the
participated in the demonstration. Mr. Fitch,
patience, aroused interest and delight, while r
that these responses could give way to fear if
cipitously. Where empathy can sometimes lead t
served the function of a sensitive detector gui
tion. There is a kind of artistry in this proc
amount of intellectual understanding of behavio
uninspired teaching experience. It reflects th
in those processes of nature so aptly described
Platt as a form of chain reaction:

> Chain-processes seem, and are, so much
> the universe. A waterfall. A thunders
> feel their changes of form, their setba
> though we were part of them, as though
> our very own. And are they not? Chain
> of nature which is least mechanical, wh
> identify with ongoing and universal pro
> (1966, p. 56).

Although he did not set out to do so, M
into what might be described as an "intrinsic r
the world anew through the eyes of a child.

Refer to Section IV for additional disc

COMMENTS: Word Association

ctional plan is extremely clear and straightforward. It is intel-
d in terms of the eight questions on evaluation (Instructional
ortant to note that this program provides a transitional step to
here appears to be a real need for such a step in the training of
and severely multi-handicapped children with the Peabody materials.

nything else, activation and arousal implies a "turning on" of the
e world. If this can be done with a sense of wonderment and joy,
dramatic and of sheer discovery, so much the better. As noted in
xperiences of this kind can enhance everyone present, teacher
emphasis is on spontaneity and innovation.

of the demonstration occurred when Mr. Fitch presented a live
he children enrolled in the Santa Cruz Development Center who
demonstration. Mr. Fitch, with sensitivity, gentleness and
nterest and delight, while remaining acutely aware of the fact
s could give way to fear if the live specimen was presented pre-
empathy can sometimes lead to distortion, in this instance, it
of a sensitive detector guiding the entire process of presenta-
ind of artistry in this process that cannot be gained through any
tual understanding of behavior modification, cognitive theory, or
experience. It reflects the teacher's sensitivity to and delight
of nature so aptly described by the renowned biophysicist John R.
chain reaction:

esses seem, and are, so much more alive than the rest of
se. A waterfall. A thunderstorm. Newborn puppies. We
changes of form, their setbacks and advances,.... as
were part of them, as though their reaction systems were
wn. And are they not? Chain-reactions represent the side
which is least mechanical, where we can empathize and
ith ongoing and universal processes that we, too, represent
56).

e did not set out to do so, Mr. Fitch provides us with a glimpse
described as an "intrinsic reinforcement" for teaching--discovering
ough the eyes of a child.

ection IV for additional discussion.

COMMUNICATI

B. AUDITORY DISCRIMINATIO

OBJECTIVE: Response of any kind by the children to a given sound.

PREREQ

INSTRUCTIONAL METHODS

1. Children sit on chairs at table, beside the teacher and teacher's aide.
2. Teacher begins to present items to stimulate sound.
3. Teacher says, "listen, I have a surprise for you!"
4. Teacher takes out "cow-sound" toy and lets each child listen to it, touch it, and manipulate it.
5. Teacher takes out Rattle... etc.
6. Teacher takes out Squeak toy... etc.
7. Teacher takes out Bell... etc.
8. Teacher places all toys under a large cloth.
9. Teacher places her hand under the cloth and makes one of the toys "sound-act."

1. t C o

3. t C s

8. C

9. t C

COMMUNICATION

B. AUDITORY DISCRIMINATION OF GROSS SOUNDS

se of any kind by
ildren to a given

PREREQUISITE(S): Ability of children to show, physically or verbally, any type of response to sound.

TIONAL METHODS	LEARNING ACTIVITIES
n chairs at table, cher and teacher's	1. to 2. Children should begin to show some kind of awareness of the teacher's presence.
to present items to d.	
'listen, I have a ou!"	3. to 7. Children should show some response to sound, verbally or physically.
out "cow-sound" toy child listen to it, manipulate it.	
out Rattle... etc.	
out Squeak toy... etc.	
out Bell... etc.	
all toys under a	8. Children watch procedure of toys being covered.
her hand under the s one of the toys	9. to 10. Children are encouraged to listen.

10. Teacher says, "What was that?" "Listen, listen!"

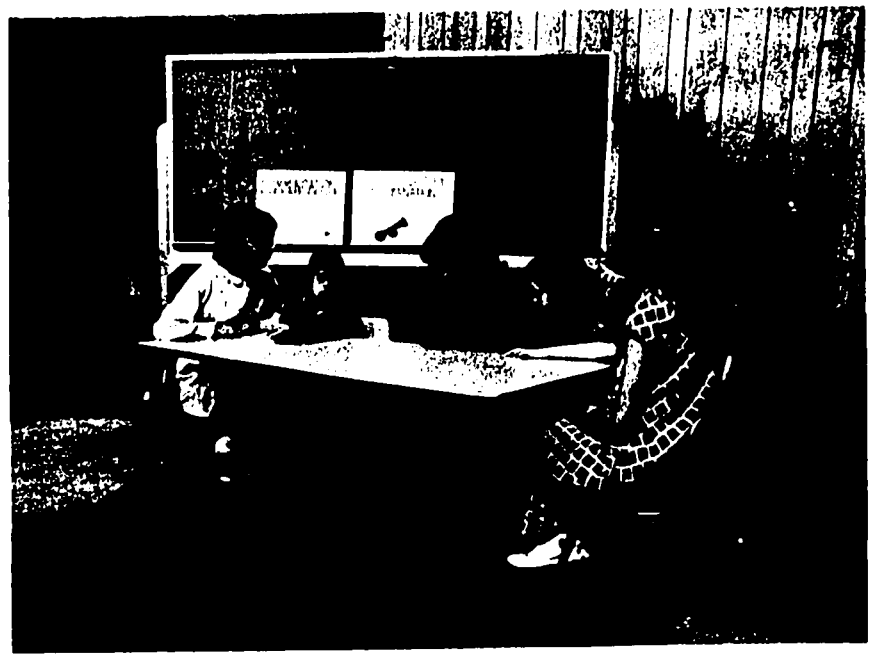
11. Teacher uncovers objects and asks one of the children to pick the toy which made the sound.

12. Teacher says, "Which one made that sound?" "Can you pick the right one?"

13. Teacher repeats the same procedure for the next 3 objects.

ONAL METHODS	LEARNING ACTIVITIES
at was that?"	
objects and asks en to pick the toy und.	11. to 13. The children pick up or point to appropriate object.
ich one made that pick the right one?"	
he same procedure jects.	

1.



"Listen, listen"--each child listens to "moo" sound.

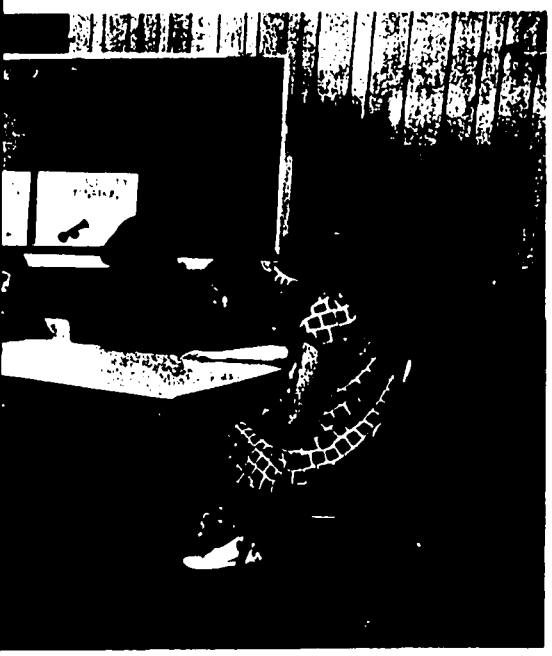
2.

3.

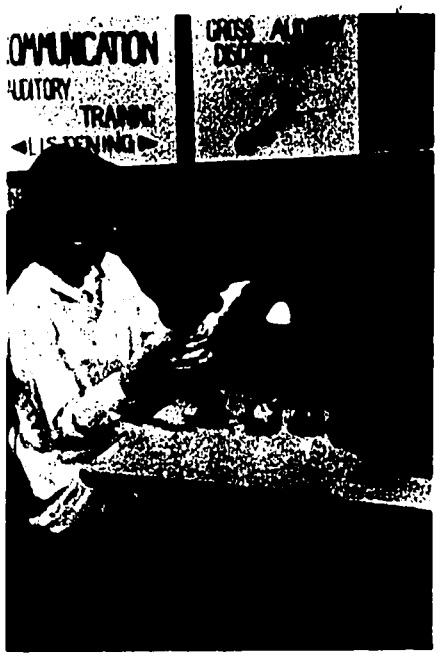
"Let's play a game..."--each child listens.

4.

2.



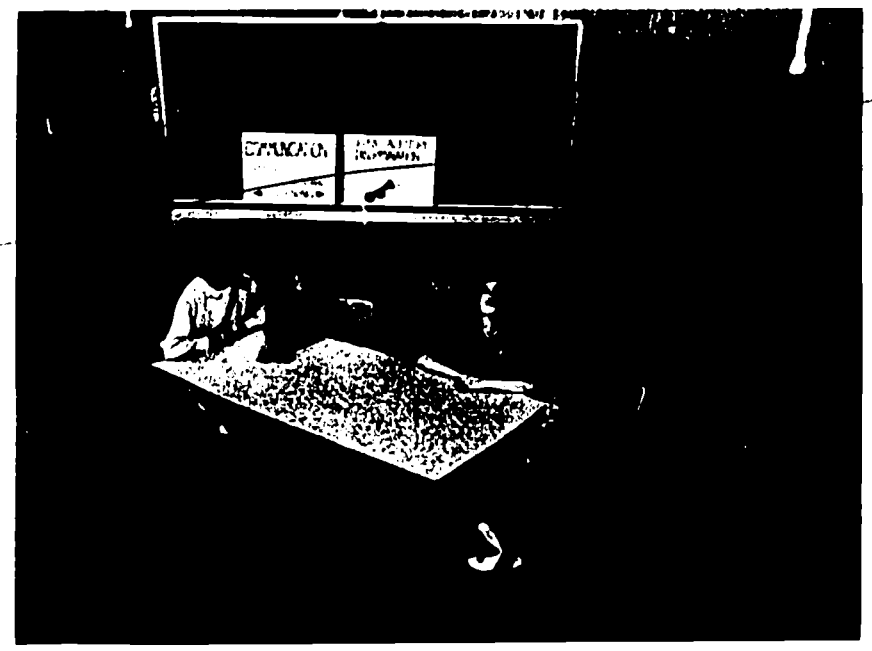
sten"--each child
"moo" sound.



Each child manipulates the sound maker (rattle).

4.

a game..."--each
en



"Good girl, that's the right one."

5.

Child picks out another sound maker.

NARRATIVE

The ability to listen with an appropriat
foundation for the more complex skills of encodi
munication.

The objective of this presentation was t
in some way to the gross sounds presented by the

It was hoped to first capture their atte
thetically examine the noise-makers and manipula
elicit correct responses to the individual sound

During the presentation, a baseline was
his responses were tabulated.

ability to listen with an appropriate sense of discrimination is the
or the more complex skills of encoding and decoding--the bases of com-

objective of this presentation was to motivate the children to respond
to the gross sounds presented by the attractive noise-makers.

as hoped to first capture their attention; then allow them to kines-
xamine the noise-makers and manipulate them at will; and finally, to
ct responses to the individual sounds presented.

ng the presentation, a baseline was established on a selected child and
s were tabulated.

COMMUNICATION: GROSS AUDI

INSTRUCTIONAL

1. Describe how this unit will be useful in de

This unit is intended to change behavior by sounds by the use of attractive, bright, so fort is to gain the child's attention. The sound at a time, and asking the child to id

2. Describe how this unit will be useful in st

The colorful toys used and the distinctive child with the social age of these children the objects involves other senses besides involving the children.

3. Describe how this unit will contribute to

The teacher demonstrates the use of each to how the sound is produced. Each child is teacher's action to produce the sound.

4. Is this unit's theoretical orientation dir

It is direct. The purpose is to teach the sounds and these sounds are used directly

5. Is the unit's theoretical orientation (1) (3) eclectic? Explain.

Eclectic. It is action oriented, but invo and interpretation of sound as well.

COMMUNICATION: GROSS AUDITORY DISCRIMINATION

INSTRUCTIONAL LEVELS

how this unit will be useful in dealing with behavioral change.

is intended to change behavior by teaching the child to attend to gross
the use of attractive, bright, sound-making objects. The initial ef-
o gain the child's attention. Then by covering the objects, using one
a time, and asking the child to identify the object making the sound.

how this unit will be useful in stimulating action and arousal.

ful toys used and the distinctive sound made by each is appealing to the
h the social age of these children. The actual handling and using of
ts involves other senses besides hearing, thus further stimulating and
the children.

how this unit will contribute to modeling and imitation.

er demonstrates the use of each toy, such as shaking the rattle, to show
ound is produced. Each child is then given the opportunity to copy the
action to produce the sound.

nit's theoretical orientation direct or indirect? Explain.

ect. The purpose is to teach the child to discriminate among gross
d these sounds are used directly for that express purpose.

it's theoretical orientation (1) behavioristic, (2) cognitive, or
tic? Explain.

It is action oriented, but involves the internal process of hearing
pretation of sound as well.

INSTRUCTIONAL LEVELS (Cont'd.)

6. Describe how the unit provides for the transfer o

It is hoped that by learning to listen and discri
child will be able to progress to discrimination
of words and parts of words.

7. Describe how this unit relates to other training

It relates to almost every other area of training
hearing child, since the hearing of directions, e
the child's ability to listen.

8. Describe how this unit might be affected by the i
or personality.

This unit demands patience and the willingness to
the part of the teacher. The teacher needs to ha
they could become distracting and confusing to th

(Cont'd.)

unit provides for the transfer of training.

by learning to listen and discriminate among gross sounds, the
le to progress to discrimination among finer sounds such as those
ts of words.

s unit relates to other training areas.

most every other area of training that would be used with a
since the hearing of directions, explanations, etc. depends upon
ity to listen.

s unit might be affected by the instructor's teaching technique

s patience and the willingness to devote a great deal of time on
teacher. The teacher needs to handle the objects carefully or
he distracting and confusing to the child.

Gross Auditory Discrimination (Cont'd.)

Equipment List

Plastic squeeze toy
Rattle
Bell
Cow-sound
Table
Chairs
Large cloth
Sack for toys

Supplies List

Identification card (Title)

Bibl

See

Eval

1.
2.
3.

on (Cont'd.)

Bibliography

See combined list for COMMUNICATIONS.

e)

Evaluative Tools

1. Tentative Guide (last year's)
2. Preschool PAR, Edgar A. Doll
3. Denver Development Scale

COMMENTS: Auditory Discrimination of Gross Sounds

This excellent instructional plan complements and ext initiated in the Word Association unit of Communication. Onc and Arousal is an extremely important variable. The training time-honored tradition in the field of sensory education, a t historically through Montessori, Seguin, and Itard.

Piaget has shown that for young children, the old say of mind" is quite applicable. Normal young children and olde an object which later disappears behind a screen lose interes disappeared in thin air. They fail to look for it behind the ample opportunity to do so.

One way to combat the "out of sight, cut of mind" te ing a powerful orienting response (Activation and Arousal). tion and Arousal was developed in this artistically conceive you have experienced as an adult in the course of witnessing For example, as the lady was being sawed in half, didn't you her body and noticeably wince? You visualized and vicarious scene. It was probably so compelling, in fact, that you cou encing it in your mind's eye. And this image remained with act.

This program, in the service of Activation and Arous the best features of a skillfully executed magic act. As in "victim" of the magician's saw, the objects, rendered all th reinforcing through carefully guided auditory, tactual and the objects of a sustained orienting reaction during the int covered with the cloth. The subjects, therefore, neither f visual and auditory properties.

The program, then, entails the most basic and funda and memory. This is a form of readiness training that will of subsequent instruction, whether cognitive or behaviorist

For further discussion refer to Section IV.

Thom

COMMENTS: Auditory Discrimination of Gross Sounds

nt instructional plan complements and extends the process d Association unit of Communication. Once again, Activation tremely important variable. The training activities follow a on in the field of sensory education, a tradition readily traced Montessori, Seguin, and Itard.

hown that for young children, the old saying "out of sight, out plicable. Normal young children and older retardates when viewing r disappears behind a screen lose interest in it and act as if it air. They fail to look for it behind the screen, even when given do so.

combat the "out of sight, out of mind" tendency is through develop- ting response (Activation and Arousal). To understand how Activa- s developed in this artistically conceived sequence, consider what as an adult in the course of witnessing a top-flight magic show. lady was being sawed in half, didn't you imagine the blade severing bly wince? You visualized and vicariously experienced this hidden bly so compelling, in fact, that you could hardly resist experi- nd's eye. And this image remained with you until the end of the

n, in the service of Activation and Arousal, incorporated some of f a skillfully executed magic act. As in the case of the female ician's saw, the objects, rendered all the more interesting and carefully guided auditory, tactual and visual experiences, were stained orienting reaction during the interval in which they were oth. The subjects, therefore, neither forgot the objects or their properties.

, then, entails the most basic and fundamental lessons in attention s a form of readiness training that will pay off in almost any form uction, whether cognitive or behavioristic.

discussion refer to Section IV.

Thomas S. Ball

COMMUNICATIO

C. RECEPTIVE UNDER

OBJECTIVE: Comprehension of instructions given on record. Development of imitative behavior.

INSTRUCTIONAL METHODS

1. Children and teacher are seated at table.

2. Teacher says, "you're tired, you've been sitting so long--let's stand up and exercise."

3. Teacher and children stand up and exercise.

4. Put record on "Nothing to Do."

5. As record goes through marching, jumping, reaching up and down, etc., teacher models activities and children imitate.

6. If child is unable to do activity, teacher assists child to complete.

COMMUNICATION

C. RECEPTIVE UNDERSTANDING

on of instruc-
on record.
of imitative

PREREQUISITE(S): The ability to listen and to have some mobility.

ONAL METHODS

er are seated at

're tired, you've
ng--let's stand

en stand up and

thing to Do."

rough marching,
up and down,
els activities
ate.

e to do activity,
child to complete.

LEARNING ACTIVITIES

1. Not applicable.

2. For children who do not respond to verbal command to stand, the teacher takes their hands and assists them in standing.

3. Learning receptive understanding of command "stand up."

4. Not applicable.

5. Some children start marching with teacher to record, but assistance is given to those who need it by taking their hands to begin them marching. When jumping direction is played on record, teacher models jumping which children start imitating. Some may watch without jumping.

6. Teacher holds non-jumper under armpits and jumps up and down with him.

1.

One child responds to verbal command and one is assisted.

"Let's stand up and exercise."

2.

Exercise continue

3.

Children follow directions of record. Teacher provides assistance.

"So he marched and he marched."

4.

Marchin continu

and up and exercise."

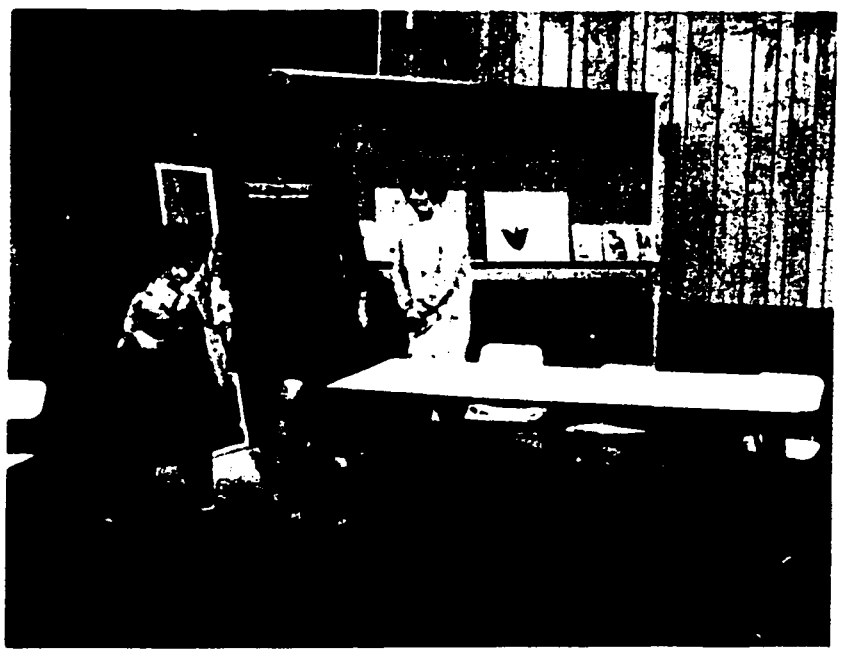
2.

Exercise continues.

ched and he marched."

4.

Marching continues.



COMMENTS: Receptive Understanding

This instructional plan, along with the Orff-Schulwe development and utilization of imitation for instructional p point of similarity is that it exploits the possibilities of for the stimulation of imitation. Also, it employs music an that are both activating and reinforcing for the child.

Even in the brief account of the demonstration there procedure can produce the desired results. In step #5 of In Learning Activities, we see how some children begin to learn teacher's actions. Even though a child may not overtly resp activity and may learn something from it.

Unlike Orff, this plan utilizes a record rather than This could constitute an advantage in that the teacher is pr structure. The lively story and musical background provided elicit the children's active participation. It seems quite ing would help "carry" the activity--would require much less teacher than does Orff. It is also likely that the record c without loss of interest and for some, with even an enhancem

RECORD: "NOTHING TO DO"

Once there was a little boy who had nothing to do. want to play with his toys, or look at his books or out to play. He sat thinking for a long time, swing feet. As he watched them going back and forth, back he got an idea! How many things could he do with hi

1. Marching -
So he marched and he marched, he paraded all around. down, in and out, up and down, turn-a-bout. He marc from room to room. He marched everywhere. He parad in the kitchen, in the parlor, in the bedrooms, in t said "That's enough. It's time to stop." So he mar marched, he paraded all around, in the kitchen, in t the bedrooms, in the hall and said "That's enough. stop." But he didn't stop for long....

COMMENTS: Receptive Understanding

al plan, along with the Orff-Schulwerk unit, emphasizes the
ion of imitation for instructional purposes. An additional
hat it exploits the possibilities of the group experience
nitation. Also, it employs music and rhythm, activities
and reinforcing for the child.

account of the demonstration there is evidence that the
desired results. In step #5 of Instructional Methods and
see how some children begin to learn through imitation of the
though a child may not overtly respond, he watches the
omething from it.

s plan utilizes a record rather than musical instruments.
advantage in that the teacher is provided with much more
ory and musical background provided by the record may help
tive participation. It seems quite possible that the record-
he activity--would require much less improvisation from the
It is also likely that the record could be played repeatedly
and for some, with even an enhancement of interest.

G TO DO"

little boy who had nothing to do. He didn't
h his toys, or look at his books or even to go
sat thinking for a long time, swinging his
ched them going back and forth, back and forth,
How many things could he do with his feet.

d he marched, he paraded all around. Up and
, up and down, turn-a-bout. He marched everywhere
m. He marched everywhere. He paraded all around,
in the parlor, in the bedrooms, in the hall and
ugh. It's time to stop." So he marched and he
ded all around, in the kitchen, in the parlor, in
the hall and said "That's enough. It's time to
idn't stop for long....

COMMENTS (Cont'd.)

2. Jumping -

....and then he jumped and jumped so very high, so very high. He jumped and jumped and jumped jumped and stopped for a breath. Then he went jumping until he could jump no more.

3. Tip-toe

....Then he tip-toed here and he tip-toed there and fro, not too fast, not too slow. He tip-to a sound. Tip-toe here and tip-toe there, in th parlor, in the bedrooms, in the hall. He said, it's time to stop."

4. Skating -

....and he pretended there was ice all over the skating, skating on the ice. Round and round, and round, smoothly glide. He skated everywher on the ice. Round and round, gently slide. Ro glide. Until he said, "I'll have to stop. The

"Now let me see. How many things can I do with

So he reached to the sky and he touched toes a sky and he touched toes. Up and down. Up and too much for me. Stop! Stop! Stop!"

While minimization of structure and the demand advantageous, these factors can also function as limit those seeking to develop variability and spontaneity i

g -

en he jumped and jumped so very high, jumped and jumped
gh. He jumped and jumped and jumped so high, jumped and
stopped for a breath. Then he went right on jumping,
til he could jump no more.

e

e tip-toed here and he tip-toed there, up and down, to
ot too fast, not too slow. He tip-toed around without
Tip-toe here and tip-toe there, in the kitchen, in the
the bedrooms, in the hall. He said, "That's enough,
to stop."

g -

pretended there was ice all over the floor, and he went
kating on the ice. Round and round, gently slide. Round
smoothly glide. He skated everywhere, skating, skating
. Round and round, gently slide. Round and round, smoothly
til he said, "I'll have to stop. There's no more ice."

ne see, How many things can I do with my arms and hands."

ched to the sky and he touched toes and he reached to the
touched toes. Up and down. Up and down. "And this is
for me. Stop! Stop! Stop!"

imization of structure and the demand for improvisation can be
se factors can also function as limitations and constraints for
develop variability and spontaneity in behavior. This is not to

say that such traits cannot be fostered with the present pl
however, that they are given relatively greater emphasis in
Spontaneity, variability, and inventiveness represent value
heart of Orff as an aesthetic and philosophical system. It
recognize that these values may be powerful determinants of
approaches and interprets her own work.

Viewed specifically as classroom activities, this u
than Orff under various circumstances and with certain obje
emphasis on Subjective Factors is to bring out the point th
oneself to Orff, he does not simply incorporate an instruct
fies with and "buys" a philosophy with a powerfully ingrain
own. As with any other philosophic position, this could co
or disadvantage depending upon how it is reacted to and cha
that becomes formalized and codified carries with it the da
must eventually defend it as a form of quasi-religious syst
to criticism and revision. The flexibility built into Orff
mit this to happen. In any event, the present unit should
the kinds of revision and improvement dictated by practica
it to mentally retarded children.

For further discussion refer to Section IV.

Thomas S.

t be fostered with the present plan. It would appear,
en relatively greater emphasis in Orff-Schulwerk.
and inventiveness represent values that lie at the
ic and philosophical system. It is important to
s may be powerful determinants of how the teacher
her own work.

y as classroom activities, this unit may function better
rcumstances and with certain objectives in mind. The
tors is to bring out the point that when one commits
ot simply incorporate an instructional plan, he identi-
losophy with a powerfully ingrained value system of its
ilosophic position, this could constitute an advantage
upon how it is reacted to and channeled. Any approach
d codified carries with it the danger that its disciples
as a form of quasi-religious system that does not admit
The flexibility built into Orff will probably not per-
y event, the present unit should readily be subject to
improvement dictated by practical experience in applying
ildren.

sion refer to Section IV.

Thomas S. Ball

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Evaluative Scale	(See Engel, Bibliography)
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UNIT 4

SELF-HELP SKILLS

A. Self-Help Training[1]
   Various Behaviors

B. Nose Blowing

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1 From: A Tentative Guide for the Instruction and T
Retarded and Multi-Handicapped Children, Santa Cru

UNIT 4

SELF-HELP SKILLS

de for the Instruction and Training of the Profoundly
dicapped Children, Santa Cruz, California, August 1969.

SELF-

A. SEL

The following are important rules of th

Teach one skill at a time.

It is best to teach one task at
confused and be unable to determine wha

Teach new skills only when he has maste

The child may learn rapidly and
one task to another. However, in order
frustrated, progress to the next skill
him. He should be able to do what is r
begin teaching the next task.

Make your directions as simple and clea

Use simple language and exagger
is to do.

Reinforce (reward) the desired behavior

As soon as the child has done w
ment. Don't delay--help him know what

Work gradually.

Fit your demands to the learnir
to teach part of the skill at a time.
you wish, and require more skill as the

SELF-HELP SKILLS

A. SELF-HELP TRAINING

ng are important rules of thumb to follow in training children.

kill at a time.

is best to teach one task at a time so that the child will not become
d be unable to determine what you wish him to do.

kills only when he has mastered what he has.

child may learn rapidly and you will be tempted to quickly change from
another. However, in order to avoid the child's becoming confused and
progress to the next skill only when he has mastered what you are teaching
ould be able to do what is requested at least 4 out of 5 times before you
ing the next task.

irections as simple and clear-cut as possible.

simple language and exaggerated gestures to help the child know what he

reward) the desired behavior as it is being completed.

soon as the child has done what you are requesting, give him his reinforce-
t delay--help him know what he is getting the reward for.

lly.

your demands to the learning ability of the child. It is often necessary
rt of the skill at a time. At first reward even poor attempts to do what
nd require more skill as the child gains confidence and ability.

Try to give a great deal of practice.

It is best to allow the child as much
the day, as possible, so don't make such demand

Give social reinforcement along with food rewar

Your approval can be a powerful motiv
food reinforcement at first, and then reduce th
less often, but continue social reinforcement.
responses for your approval only, he has become
of the aims of this program. It may be necessa
skills are to be taught, but again reduce this
for your approval.

NOTE: It is important that the child master ea
next skill.

BEHAVIOR TA

ATTENTION

I. Looks at you when name is called

COMING TO YOU

I. At least one step toward you:

a. with a tug on shoulder plus
b. light touch on shoulder plus
c. gesture plus spoken directio
d. spoken direction only

al of practice.

o allow the child as much practice during the session, and during
so don't make such demands that he cannot practice what he knows.

ent along with food rewards.

l can be a powerful motivator for the child. Give both social and
first, and then reduce the food given. That is, begin giving food
ue social reinforcement. When the child will make the desired
roval only, he has become a more socialized person, which is one
ogram. It may be necessary to reintroduce food rewards when new
t, but again reduce this as the child shows that he will work

that the child master each of these before progressing to the

BEHAVIOR TAUGHT

you when name is called.

one step toward you:

a tug on shoulder plus spoken direction
t touch on shoulder plus spoken direction
ure plus spoken direction
ken direction only

COMING TO YOU (Cont'd.)

II. At least 5 feet toward you:

a. with gesture plus spoken direction
b. spoken direction only

SITTING DOWN

I. Will sit down when standing in front of a c

a. with a gentle push on top of shoulder p
b. with a light touch on top of shoulder p
c. with a downward gesture plus spoken dir
d. with spoken direction only

II. Moves at least 5 feet to chair and sits dow

a. with a sweeping downward gesture plus s
b. with spoken direction only

III. With teacher at least 5 feet from child and chair, will sit down:

a. with downward gesture plus spoken direc
b. with spoken direction only

REMAINING SEATED

I. Child will remain seated for 10 seconds, wi front of him, using:

a. gesture for "stay" plus spoken directio
b. gesture plus spoken direction
c. spoken direction only

5 feet toward you:

gesture plus spoken direction
direction only

down when standing in front of a chair:

a gentle push on top of shoulder plus spoken direction
a light touch on top of shoulder plus spoken direction
a downward gesture plus spoken direction
spoken direction only

least 5 feet to chair and sits down:

a sweeping downward gesture plus spoken direction
spoken direction only

her at least 5 feet from child and child at least 5 feet from
ll sit down:

downward gesture plus spoken direction
spoken direction only

remain seated for 10 seconds, with teacher standing in
him, using:

re for "stay" plus spoken direction, plus restraining touch
re plus spoken direction
direction only

REMAINING SEATED (Continued)

II. Child will remain seated for 10 sec
away, using:

a. gesture plus spoken direction
b. spoken direction only

III. Child will remain seated for 1 minu
away, using:

a. gesture plus spoken direction
b. spoken direction only

STANDING UP

I. Will stand up with teacher directly

a. a gentle lift under arm or shou
b. a light touch and gesture plus
c. upward gesture plus spoken dire
d. spoken direction only

II. Will stand up with teacher at leas

a. with upward gesture plus spoke
b. with spoken direction only

UNDRESSING: T-SHIRT

I. Shirt off the child except for one
shirt off the rest of the way with

a. pulling slightly at shirt, plu
b. giving spoken direction only

tinued)

ill remain seated for 10 seconds, with teacher at least 5 feet
sing:

ture plus spoken direction
ken direction only

ill remain seated for 1 minute, with teacher at least 5 feet
sing:

ture plus spoken direction
ken direction only

and up with teacher directly in front, with:

entle lift under arm or shoulder plus spoken direction
ight touch and gesture plus spoken direction
ard gesture plus spoken direction
ken direction only

and up with teacher at least 5 feet away:

h upward gesture plus spoken direction
h spoken direction only

ff the child except for one shoulder and arm. Child takes
ff the rest of the way with teacher:

ling slightly at shirt, plus spoken direction
ing spoken direction only

UNDRESSING: T-SHIRT (Cont'd.)

II. Shirt half-way off (pulled over
with teacher:

a. pulling slightly at shirt,
b. giving spoken direction onl

III. Shirt completely on, with teach

a. pulling slightly at shirt,
b. spoken direction only

DRESSING: T-SHIRT

I. Shirt on except for one remaini
He will push it through with:

a. a push on his arm, plus spo
b. spoken direction only

II. Shirt on, except for one empty

a. push on the arm, plus spoke
b. spoken direction only

III. Shirt over head, both sleeves

a. lightly touching the arms,
b. spoken direction only

IV. Hand shirt to child with botto
over his head and puts arms in

a. gently guiding the directi
b. spoken direction only

V. Shirt handed to child. He mus

a. with necessary guidance by
b. spoken direction only

IRT (Cont'd.)

rt half-way off (pulled over head, but both arms in sleeves)
n teacher:

pulling slightly at shirt, plus spoken direction
giving spoken direction only

rt completely on, with teacher:

pulling slightly at shirt, plus spoken direction
spoken direction only

T

rt on except for one remaining sleeve. Child's hand in the sleeves.
will push it through with:

a push on his arm, plus spoken direction
spoken direction only

rt on, except for one empty sleeve:

push on the arm, plus spoken direction
spoken direction only

rt over head, both sleeves empty. Pulls shirt on with teacher:

lightly touching the arms, plus spoken direction
spoken direction only

d shirt to child with bottom opened toward him. He then pulls shirt
r his head and puts arms in sleeves, with teacher:

gently guiding the direction of the shirt plus spoken direction
spoken direction only

rt handed to child. He must locate the bottom of it and put it on:

with necessary guidance by teacher, plus spoken direction
spoken direction only

UNDRESSING: TROUSERS

I. Begin with elastic-banded boxer shorts.
trousers nearly off; over one foot only.

a. placing child's hands on trousers and
plus spoken direction
b. pointing to trousers, plus spoken di
c. spoken direction only

II. Seated, trousers at both knees. Removes

a. pointing at trousers plus spoken dir
b. spoken direction only

III. Either seated or standing, trousers all
when teacher:

a. points at trousers plus spoken direc
b. spoken direction only

DRESSING: TROUSERS

I. Begin with elastic-banded boxer shorts o
child's hips. Child should pull them th

a. giving the pants a small tug upward,
b. spoken direction only

II. Pants on child, pulled up to knees. He
on, with teacher:

a. giving the pants a small tug upward,
b. spoken direction only

III. Both legs in pants, but pulled up to ank
the rest of the way on, with teacher:

a. giving small tug on pants, plus spok
b. spoken direction only

ic-banded boxer shorts. Child should be seated, with
off; over one foot only. He removes pants, with teacher:

d's hands on trousers and helping him pull them off,
direction
trousers, plus spoken direction
tion only

at both knees. Removes them with teacher:

trousers plus spoken direction
tion only

standing, trousers all the way up. Takes pants off

ousers plus spoken direction
tion only

ic-banded boxer shorts or jeans. Pull pants up to
child should pull them the rest of the way on, with teacher:

pants a small tug upward, plus spoken direction
tion only

pulled up to knees. He pulls them the rest of the way
:

pants a small tug upward, plus spoken direction
tion only

nts, but pulled up to ankles only. Child pulls them
way on, with teacher:

l tug on pants, plus spoken direction
tion only

DRESSING: TROUSERS (Cont'd.)

IV. Child should be seated. One leg in pa
Child puts free foot in pants leg and
instructions are:

a. touching free foot and pointing to
direction
b. spoken direction only

V. Child seated. Hand him his pants, wit
feet in and pulls them up, with teache

a. touching the feet and pointing to
b. spoken direction only

VI. Child seated. Pants handed to him fol
them on:

a. with teacher pointing to the top o
b. spoken direction only

UNDRESSING: SOCKS

I. Start with sock on toe. Child removes

a. placing child's hands on sock and
b. spoken direction only

II. Sock halfway on foot. Child removes i

a. pointing to sock plus spoken direc
b. spoken direction only

III. Sock completely on one foot. Child re

a. pointing to sock, plus spoken dire
b. spoken direction only

IV. Both socks on feet. Child removes the

a. pointing to socks, plus spoken di
b. spoken direction only

RS (Cont'd.)

ld should be seated. One leg in pants only. Other foot free.
ld puts free foot in pants leg and pulls the pants up. Teacher's
tructions are:

touching free foot and pointing to the pants leg, plus spoken direction
spoken direction only

ld seated. Hand him his pants, with the top opened. He puts both
t in and pulls them up, with teacher:

touching the feet and pointing to the pants legs, plus spoken direction
spoken direction only

ld seated. Pants handed to him folded, and he locates the top and puts
m on:

with teacher pointing to the top of the trousers, plus spoken direction
spoken direction only

S

rt with sock on toe. Child removes sock with teacher:

placing child's hands on sock and removing it, plus spoken direction
spoken direction only

k halfway on foot. Child removes it, with teacher:

pointing to sock plus spoken direction
spoken direction only

k completely on one foot. Child removes it, with teacher:

pointing to sock, plus spoken direction
spoken direction only

h socks on feet. Child removes them, with teacher:

pointing to socks, plus spoken direction
spoken direction only

DRESSING: SOCKS

I. Start with sock on except that it ne
Child pulls it up, with teacher:

a. placing child's hands on the soc
direction
b. pointing to sock, plus spoken di
c. spoken direction only

II. Sock halfway on. Child pulls it the

a. pointing to the sock, plus spoke
b. spoken direction only

III. Sock hanging on toes only. Child pu

a. pointing to the sock, plus spoke
b. spoken direction only

IV. Hand sock to child, with the top ope

a. helping him to put it over the
b. pointing to the top of the sock
c. spoken direction only

h sock on except that it needs to be pulled up on the ankle.
ls it up, with teacher:

ng child's hands on the sock and pulling it up, plus spoken
tion
ing to sock, plus spoken direction
n direction only

way on. Child pulls it the rest of the way up, with the teacher:

ing to the sock, plus spoken direction
n direction only

ing on toes only. Child pulls it on, with teacher:

ing to the sock, plus spoken direction
n direction only

to child, with the top opened. He puts it on with the teacher:

ng him to put it over the toes, plus spoken direction
ing to the top of the sock, plus spoken direction
n direction only

SELF-HELP SKILL

B. NOSE BLOWIN

PREP

OBJECTIVE: To expel air from the nasal passage.

INSTRUCTIONAL METHODS

1.

1. Awareness of problem:
   a. Take child to mirror.
   b. Sneeze while looking into mirror.
   c. Demonstrate (dramatically) displeasure at own appearance.
   d. Blow nose with large handkerchief.
   e. Give help to child, saying, "You need to blow your nose too."

2.

2. Awareness of facial parts:
   a. Show child large animal pictures of toy animals and discuss face parts.
   b. Take child's hand and touch teacher's nose, chin, and mouth while discussing these parts.
   c. Take child's hand and touch his nose, chin, and mouth while naming them at the same time.
   d. Put masking tape on nose of teacher and child. Teacher removes tape from her nose and ask child to remove his.

3.

3. Awareness of sensation:
   a. Stand and model behavior of inhaling through the mouth and exhaling through the nose. Put child's hand on teacher's chin to experience motion of chin going up and down as mouth opens and closes and to feel the air coming from the nose.

SELF-HELP SKILLS

B. NOSE BLOWING

PREREQUISITE(S): Awareness of self and others. Some ability to attend. Existence of problem.

el air from the
passage.

TIONAL METHODS

roblem:
to mirror.
le looking into mirror.
e (dramatically) dis-
t own appearance.
with large handkerchief.
to child, saying, "You
ow your nose too."

facial parts:
large animal pictures of
ls and discuss face parts.
d's hand and touch teacher's
n, and mouth while discussing
ts.
d's hand and touch his nose,
mouth while naming them at
time.
ng tape on nose of teacher
. Teacher removes tape from
and ask child to remove his.

sensation:
model behavior of inhaling
the mouth and exhaling through
. Put child's hand on teacher's
experience motion of chin going
own as mouth opens and closes
eel the air coming from the nose.

LEARNING ACTIVITIES

1. Awareness of problem:
   a. Child looks at self in mirror.
   b. Child looks at adult in mirror.
   c. Same as b.
   d. Same as b.
   e. Child puts handkerchief to nose. He then receives reinforcement.

2. Awareness of facial parts.
   a. Child looks.
   b. Child feels teacher's nose, chin, mouth.
   c. Child feels own nose, chin, mouth.
   d. Child pulls tape and is rewarded by praise.

3. Awareness of sensation:
   a. Child watches; child feels motion and air.

3. Awareness of sensation: (Cont'd.) 3.
   b. Teacher helps child to hold hand against his own chin and experience the above sensations.
   c. "Now put your hand on your chin and see if you can feel the air."

4. Kleenex on card held in mouth. 4.
   a. Teacher holds 3x5 card in mouth (between teeth), places a small piece of rolled Kleenex on card and blows it off.
   b. Teacher encourages the child to imitate the activity.
   c. Teacher provides a reinforcement.

5. Blow Kleenex -
   a. Teacher holds a Kleenex in front of own face and blows to make the Kleenex flutter.
   b. Teacher encourages the child to imitate this activity.
   c. Teacher provides the reinforcement.

S

'd.)
old hand
experience

ur chin
the air."

h.
n mouth
a small
on card

child to

forcement.

x in front of
make the Kleenex

child to imitate

einforcement.

LEARNING ACTIVITIES

3. b. Child feels own chin.

c. Child puts hand on own chin, feels air and is rewarded.

4. a. Child watches.

b. Child imitates activity.

c. Child receives reward.

a. Child watches.

b. Child imitates activity.

c. Child receives reward.

FEATHER GAME

Activities to stimulate and encourage blowing through

INSTRUCTIONAL METHODS

1. Feather Activity
   a. Teacher holds feather under her own nose and blows.
   b. Teacher holds feather under the child's nose.
   c. Teacher provides a reinforcement (food, praise, enjoyment of activity, etc.) for successive approximations.

2. Ping-Pong Ball in Pie Plate
   a. Teacher holds the pie plate under her own nose and blows the ping-pong ball around the pie plate.
   b. Teacher encourages child to imitate the activity.
   c. Teacher provides reinforcement as in 1.c.

3. Mirror
   a. Teacher holds mirror to own nose and blows to make steam on mirror.
   b. Teacher encourages child to imitate activity.
   c. Teacher provides reinforcement as in 1.c.

1.
a.
b.
c.

2.
a.
b.
c.

3.
a.
b.
c.

FEATHER GAME

ulate and encourage blowing through the nose.

TIONAL METHODS	LEARNING ACTIVITIES
ty lds feather under her nd blows. lds feather under the se. ovides a reinforcement ise, enjoyment of etc.) for successive ions.	1. a. Child watches feather moving. b. Child attempts to blow feather. c. Child continues appropriate behavior.
in Pie Plate lds the pie plate under se and blows the ping- around the pie plate. ncourages child to imitate ty. rovides reinforcement as	2. a. Child watches. b. Child imitates activity. c. Child continues appropriate behavior.
olds mirror to own nose to make steam on mirror. ncourages child to imitate rovides reinforcement as	3. a. Child watches steam. b. Child imitates activity. c. Child continues appropriate behavior.

1.

"Oh, look, you have to blow your nose too!"

3.

"Blow into my hand."

ow your nose too!"

2.

"Here is the bear's nose."

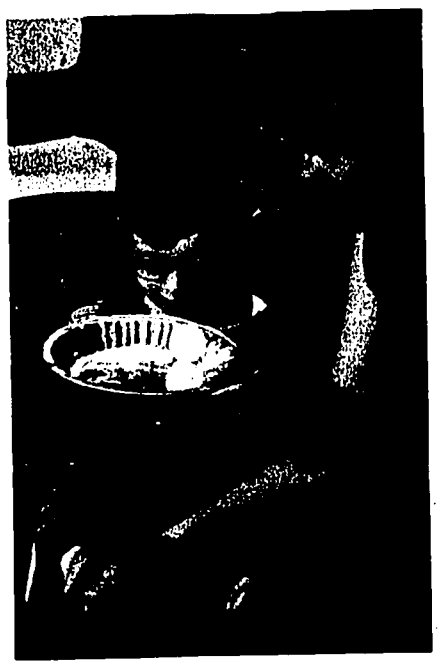
4.

"Do you feel the air coming from my nose?"

5.

"Blow the feather with your nose."

7.



"Can you blow the ping-pong ball around the pan?"

6.

eather with your nose."

"Blow steam on the mirror."

8.

blow the ping-pong ball
he pan?"

"Can you blow the Kleenex?"

9.

"Can you make the Kleenex flutter?"

B. NOSE BLOWI

NARRATIVE

General Program Ov

1. This is a program to stimulate an awareness f one's nose in order to be more socially accep

   Materials: Mirror... Masking tape... Kleenex Large animal pictures with obviou Pie plate... Index card... Cupcak

   Time Requirement: dependent upon child's int

   Purchase price: Materials are readily availa

2. No special training is required; written inst and/or sibling could engage in these activiti

3. This program was developed in response to an of Development Centers and State Hospitals es population could benefit by training in this

4. As a cooperative, innovative effort to offer problem. Therefore, no adaptive information

5. This program is applicable to all children, w whose physical limitations prevent blowing ai tioning techniques can be effectively applied basis or with a small group.

   Types of reinforcement for accomplishment mig
   a. Primary - candy, etc.
   b. Secondary - social approval from attendin
   c. Self-satisfaction through personal comfor

---

1 These are responses to the questions listed on background.

B. NOSE BLOWING

NARRATIVE [1]

General Program Overview

gram to stimulate an awareness for the need for an ability to blow
order to be more socially acceptable.

irror... Masking tape... Kleenex... Flour with pie-tin... Flower...
arge animal pictures with obvious noses... feather... Ping-pong ball...
ie plate... Index card... Cupcake with birthday candle...

ent: dependent upon child's interest span.

e: Materials are readily available household items.

aining is required; written instructions would be helpful. Parents
could engage in these activities.

was developed in response to an educational need; representatives
Centers and State Hospitals estimated that one-third of the pupil
uld benefit by training in this area.

ive, innovative effort to offer suggested programs for solving this
refore, no adaptive information has been available.

is applicable to all children, with the possible exception of those
limitations prevent blowing air through the nose. Operant condi-
iques can be effectively applied. Training should be on a one-to-one
a small group.

forcement for accomplishment might be:
candy, etc.
- social approval from attending adult.
sfaction through personal comfort.

onses to the questions listed on pages 2 and 3, plus additional

6. This program is yet to be evaluated. An init
charting indicates the potential for success.

7. Selection of this problem serves to illustrat
which there are no known adaptable programs,
between the cracks of existing programs, and
practical solutions need to be developed.

8. There is a frustrating problem which exists a
children. That is the child who cannot blow

Out of our group representing approximately 2
900 needed training in clearing of the nasal

Our objective was to select from the intricat
only one segment that we felt was critical, b
and present them to the child through modelir
and physical contact as the social reinforcer
approximation of the steps of the task.

The subject chosen to demonstrate the progra
retarded child with no speech. He was able t
happy pleasant child, he was attentive and co

9. There are many aspects in the process of blow
ness of a problem to the appropriate use of t
the many aspects of this total process we hav
that of blowing mucous from the nasal passage
mouth is one of the initial steps.

10. In order for the child to blow his nose, he m
mouth and exhale through his nose. This step
the sensation of air passing in the mouth and
hold your hand over the child's mouth in orde
nose thereby enabling him to experience the s

t to be evaluated. An initial observation through frequency
the potential for success.

problem serves to illustrate the wide range of problems for
known adaptable programs, i.e., those problems which fall
of existing programs, and for which creative and imaginative
s need to be developed.

ting problem which exists among those who work with retarded
the child who cannot blow his nose.

epresenting approximately 2700 children, it was estimated that
g in clearing of the nasal passage.

to select from the intricate process of blowing one's nose
hat we felt was critical, break it down into sequential steps
o the child through modeling and imitation. We chose praise
ct as the social reinforcement to be used on each successive
he steps of the task.

to demonstrate the program was a ten-year old mentally
h no speech. He was able to imitate single sounds. A
ld, he was attentive and cooperative.

ects in the process of blowing one's nose from the child's aware-
to the appropriate use of the handkerchief or Kleenex. Out of
f this total process we have chosen to expand the most critical,
cous from the nasal passage. Focusing attention on the nose and
e initial steps.

child to blow his nose, he must learn to inhale deeply through his
through his nose. This step is designed to create an awareness of
ir passing in the mouth and out the nose. It may be necessary to
r the child's mouth in order to force him to exhale through his
ing him to experience the sensation.

NARRATIVE (Cont'd.)

11. We chose but a few of a wide variety of activities to child's ability to blow air through the nasal passage of these activities was unimportant. A wide variety sented in order to determine those which appeal the m blowing of the nose has been satisfactorily accomplis can be used to deepen the pattern. It should be emph only a small but critical part of the total process o blow his nose appropriately into a handkerchief.

of a wide variety of activities to help shape and improve the
blow air through the nasal passage. The order of presentation
was unimportant. A wide variety of activities should be pre-
determine those which appeal the most to the child. Once
has been satisfactorily accomplished, these same activities
en the pattern. It should be emphasized again that this is
itical part of the total process of teaching a child how to
priately into a handkerchief.

SELF-HELP SKILLS: N

INSTRUCTIONAL I

1. Describe how this unit will be useful in de

This unit will be useful in describing meth
mucous. If the child can learn to clear hi
to realizing and learning the goals and rew
habits.

2. Describe how this unit will be useful in st

The purpose is to develop functional awaren
can result with an accomplished task. It c
the media of games. Personal attention pos
ness of air going outward through the nose
of appropriate placement of mucous as a was

3. Describe how this unit will contribute to m

By personal one-to-one example and use of t

4. Is this unit's theoretical orientation dire

This unit's theoretical orientation is dire

a. Example: blowing the nose
b. Basic behavior should be changed
c. Social acceptance

5. Is the unit's theoretical orientation (1) b
(3) eclectic? Explain.

Because the child will respond to a command
orientation would be termed behavioristic.

SELF-HELP SKILLS: NOSE BLOWING

INSTRUCTIONAL LEVELS

is unit will be useful in dealing with behavioral change.

be useful in describing methods to help a child clear his nose of
child can learn to clear his nose, he will be another step nearer
d learning the goals and rewards of self-grooming and better health

is unit will be useful in stimulating action and arousal.

to develop functional awareness of his nose. Pride and satisfaction
an accomplished task. It offers pleasurable experiences through
mes. Personal attention positively reinforces. It develops aware-
ng outward through the nose and nasal passage. It develops awareness
placement of mucous as a waste product.

is unit will contribute to modeling and imitation.

-to-one example and use of the mirror.

theoretical orientation direct or indirect? Explain.

oretical orientation is direct, with resultant indirect overlays:

lowing the nose
ior should be changed
ptance

heoretical orientation (1) behavioristic, (2) cognitive, or
Explain.

ld will respond to a command of "Blow," this unit's theoretical
ld be termed behavioristic.

INSTRUCTIONAL LEVELS (Cont'd.)

6. Describe how the unit provides for the trans

This unit provides for the transfer of trai
blow his nose on command, he may then expan
Kleenex when his nasal passage needs cleari
after the child learns to blow his nose, he
the Kleenex.

7. Describe how this unit relates to other tra

Other training areas include:
a. Speech
b. Hearing
c. Feeding and eating
d. Control of drooling
e. Grooming
f. Health habits

8. Describe how this unit might be affected by
or personality.

Since the modality is based on a one-to-one
teaching technique and/or personality is cr

LEVELS (Cont'd.)

ow the unit provides for the transfer of training.

provides for the transfer of training because when the child is able to
ose on command, he may then expand to the task of going and getting a
en his nasal passage needs clearing. Negative transfer may occur if
child learns to blow his nose, he doesn't acquire the skill of using
x.

ow this unit relates to other training areas.

ning areas include:

g
g and eating
l of drooling
ng
habits

ow this unit might be affected by the instructor's teaching technique
lity.

modality is based on a one-to-one modeling situation, the instructor's
echnique and/or personality is critical to the success of this unit.

Materials

Feather	Pie Plate
Masking Tape	Tea Kettle
Mirror	Tissues
Ping-Pong Ball	Toy Animals

COMMENTS: Nose Blowing

This program is a gem. It demonstrates what pe
significant problem and experience in working with reta
of a collaborative effort. As indicated by the accompa
the practical demonstration with a retarded child was h

Clearly, this program stresses Modeling and Imi
ing. Correct responses are followed immediately with s
application of operant conditioning principles. The in
specific and the program approaches it directly. Even
other learning never occurs, the practical results just

The subtleties of the program from the standpoi
relate to the various ways in which the concept of awar
gories of "awareness of facial parts and awareness of t
teristically cognitive orientation. The use of masking
methods used by Kephart (1969) in body awareness traini

Although awareness of facial parts may seem a n
training, it should be pointed out that this constitute
process whereby this particular learning takes place.
child that he "needs" to blow his nose. Does he really
chin, and mouth in order to learn nose blowing? Does i
Or is it a redundancy that may, nonetheless, provide sc
Answers to these questions must await a practical evalu

The question of awareness is seen at a more bas
"awareness of sensation." Here the child, through a co
and modeling, is put through a motor sequence which ins
excludes nasal inhalation, a response incompatible with
Discrimination of the correct direction of the respirat
having the child feel the stream of expelled air. In a
feather, ping-pong ball, mirror (steam) and Kleenex pro
consequences of nasal exhalation that effectively reinf

COMMENTS: Nose Blowing

n is a gem. It demonstrates what people with an awareness of a and experience in working with retarded children can evolve out effort. As indicated by the accompanying sequence of photographs, stration with a retarded child was highly successful.

s program stresses Modeling and Imitation as a modality for teach- ses are followed immediately with social reinforcement, a correct nt conditioning principles. The instructional objective is highly gram approaches it directly. Even if transfer of training to occurs, the practical results justify the training effort.

es of the program from the standpoints of both theory and practice s ways in which the concept of awareness has been used. The cate- of facial parts and awareness of the problem" reflect a charac- ve orientation. The use of masking tape relates closely to similar art (1969) in body awareness training.

reness of facial parts may seem a natural prerequisite to such be pointed out that this constitutes an assumption regarding the particular learning takes place. So also does instructing the s" to blow his nose. Does he really need to touch and name nose, order to learn nose blowing? Does it even facilitate such learning? cy that may, nonetheless, provide some indirect kind of payoff? estions must await a practical evaluation of these procedures.

n of awareness is seen at a more basic level in the section on tion." Here the child, through a combination of physical prompts through a motor sequence which insures nasal exhalation and lation, a response incompatible with successful nose blowing. he correct direction of the respiratory response is cued by el the stream of expelled air. In addition, the use of the ball, mirror (steam) and Kleenex provide novel and entertaining al exhalation that effectively reinforce the act.

Yet, even at this level an assumption is
awareness as a prerequisite to learning. That a
suggested in step #3 of the narrative. Thus, "I
over the child's mouth in order to force him to
enabling him to experience the sensation." This
involves an involuntary elicitation of the corre
forms involuntarily, he does emit the correct re
forced. This procedure, which is closely relate
employs the timely application of positive reinf
untary response into a voluntary one. And in th
response, the child can be made aware of the cue
of escaping air. Thus, is prior training in awa
to success?

An even more direct and simple method mi
tobacco) into the external nasal cavities to ind
expels the air through the nasal cavities in the
ively induced response can then be reinforced im
peated elicitations, it could be converted into

Because it involves the use of tobacco,
unacceptable. But it does suggest whay may be a
such training. On the other hand, what the orig
it may more than make up for in terms of additio
subsequent research findings indicate that ident
be redundant, vis-a-vis learning nose blowing, s
other grounds. Perhaps the nose blowing program
out training in the identification of facial par
critical conditions, such incidental benefits ma
program. The appropriate direction to take coul
benefit evaluation of the various direct and ind
alternative courses of action.

at this level an assumption is involved regarding the development of requisite to learning. That another alternative may be available is #3 of the narrative. Thus, "It may be necessary to hold your hand outh in order to force him to exhale through his nose, thereby perience the sensation." This technique, unlike the preceding ones, ntary elicitation of the correct response. Although the child per-y, he does emit the correct response which can subsequently be rein-edure, which is closely related to escape-avoidance conditioning, application of positive reinforcement, thereby converting an invol-to a voluntary one. And in the course of performing the involuntary d can be made aware of the cue of exhalation by feeling the stream Thus, is prior training in awareness of this cue truly a prerequisite

re direct and simple method might be to insert snuff (powdered external nasal cavities to induce sneezing. The sneeze reflexively ough the nasal cavities in the fashion of nose blowing. This reflex-nse can then be reinforced immediately. In this manner, with re-s, it could be converted into a voluntary response.

involves the use of tobacco, the "snuff" method would probably be it does suggest whay may be a rapid and efficient "short-cut" to the other hand, what the original program may lack in efficiency, ake up for in terms of additional benefits. For example, even if n findings indicate that identifying nose, mouth, etc., proves to a-vis learning nose blowing, such training can be justified on rhaps the nose blowing program is an ideal setting for carrying e identification of facial parts. If time and efficiency are not s, such incidental benefits may more than justify a more extensive opriate direction to take could only be determined through a cost- of the various direct and indirect benefits accruing from the s of action.

Thomas S. Ball

UNIT 5

IMITATION[1]

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1 From: A Tentative Guide for the Instruction a
Retarded and Multi-Handicapped Children, Santa

UNIT 5

IMITATION[1]

tive Guide for the Instruction and Training of the Profoundly
ulti-Handicapped Children, Santa Cruz, California, August 1969.

IMITATION

Sometimes training is greatly facilitated t
imitation. For example, we can think of training a
the use of various physical cues, such as pinching
forefinger. On successive trials, we can gradually
that the child himself would assume the correct pos
tion of the sound. The foregoing describes shapinc

Imitation is often much more efficient thar
readily imitated the way the teacher shaped her own
could forego the necessary steps required to physic

Some children have to be taught to imitate.
simple and obvious imitation of gross physical move
table, and then immediately rewarding the child whe
taught him to imitate increasingly complicated sequ
return to the more complicated problem of speech ir
gross motor imitation, we have established a genera
can then apply to training for the production of sp
the specifics for such a program. What is referred
the child's progress in the development of imitatic

In the training sessions, three children wc
At first, the teacher did nothing more thar
a bit of snack for herself from a bowl. Th
another teacher to do as the model teacher
a bit of snack in their own cups.

Then the second teacher took charge of the
food only when the child imitated the part
ior that was the subject of training. In e
given a snack whenever he imitated the mode
behavior--raising the arms, leaning to one
training passed to more detailed motor imit

IMITATION

s training is greatly facilitated through the development of generalized
example, we can think of training a child to make the "m" sound through
is physical cues, such as pinching his lips together with our thumb and
successive trials, we can gradually "fade out" this physical prompt so
imself would assume the correct positioning of his lips for the produc-
d. The foregoing describes shaping of a speech sound.

n is often much more efficient than shaping. For example, if the child
the way the teacher shaped her own lips to make the "m" sound, she
necessary steps required to physically prompt him.

ldren have to be taught to imitate. We can start out with some very
is imitation of gross physical movements, e.g, slapping the top of the
immediately rewarding the child when he does likewise. Once we have
itate increasingly complicated sequences of physical movements, we can
re complicated problem of speech imitation. In other words, through
ation, we have established a generalized tendency to imitate which we
o training for the production of speech sounds. The following describes
r such a program. What is referred to as a "probe" is simply a test of
ress in the development of imitation.

raining sessions, three children worked with a model teacher.
, the teacher did nothing more than sit down on a rug and take
snack for herself from a bowl. The children were prompted by
teacher to do as the model teacher had done, including taking
snack in their own cups.

second teacher took charge of the snack bowl, and she provided
y when the child imitated the part of the model teacher's behav-
was the subject of training. In early sessions, the child was
snack whenever he imitated the model teacher's gross motor
--raising the arms, leaning to one side, and the like. Later,
passed to more detailed motor imitations and finally to speech.

Periodically, the model teacher tested each cl
complex performance. The tests consisted of
neously: a gross motor act, a fine motor act
verbal statement. For example: Probe I. Ar
hands turned back, face frowning, statement:
During the test each child was reinforced if
gross motor act, whether he imitated the othe
ance or not.

As it turned out, the children imitated all t
increasing accuracy. They imitated best the
training at the time, but they did not lose t
earlier. So, when speech finally was added t
began to imitate it reliably, and they contin
tate gross, fine motor, and facial acts. Thi
growing ability to observe and imitate a comp
unreinforced, which was exactly the result we

Once imitation of sentences is established, the teach
ability to respond to questions. The following mater

The ultimate intent of imitation training was
ability to listen to novel language performan
In one year, it was possible only to develop
the children consistently imitated fairly sho
the program would have to increase the childr
longer verbal performances. Whether that can
it is one subject of the current year's resea
the program so far suggests that the extensio
to complex statements is probably a practical

Any child may have a much more elaborate verb
demonstrates in a spontaneous account of some
whether we could bring that repertoire into u
it as well, we chose a child who was probably
in the group.

y, the model teacher tested each child's ability to imitate a
formance. The tests consisted of four acts performed simulta-
gross motor act, a fine motor act, a facial expression, and a
ement. For example: Probe I. Arms out to the side, palms of
d back, face frowning, statement: "This too shall pass away."
test each child was reinforced if he imitated the teacher's
act, whether he imitated the other components of her perform-
.

d out, the children imitated all the teacher's actions with
accuracy. They imitated best the act that was the subject of
the time, but they did not lose the skills they had learned
o, when speech finally was added to the training, the children
itate it reliably, and they continued at the same time to imi-
fine motor, and facial acts. This apparently represented a
lity to observe and imitate a complex performance, even when
d, which was exactly the result we wanted.

entences is established, the teacher proceeds to develop the child's
to questions. The following material outlines such a program:

e intent of imitation training was to give the children the
listen to novel language performances and to repeat them.
,.it was possible only to develop training to the point where
n consistently imitated fairly short sentences. To be useful,
would have to increase the children's skill with longer and
al performances. Whether that can be done remains to be seen;
ubject of the current year's research. But the success of
so far suggests that the extension of verbal imitative skills
statements is probably a practical goal.

ay have a much more elaborate verbal repertoire than he
s in a spontaneous account of some happening. To find out
could bring that repertoire into use, and perhaps add to
we chose a child who was probably the least articulate
p.

We began by finding out just how inarticulate he was. The teacher asked, repeatedly over a period of 13 days, five questions such as, "Who do you like to play with?" In answer to these questions, the child usually answered with one word or two yielding a grand average over repeated inquiries of one and one-half words per answer.

Then the teacher began training. She asked, "What did you see on the way to school?" When she prompted the boy's answers with "What else," he simply repeated one and two-word answers, alternating between the two responses, "A doggie" and "TV," and repeating the pair over and over.

When it had become clear that this pattern was not likely to change by itself, the teacher provided a more logical prompt: "What kind of doggie?" The boy replied that it was a German shepherd, and the teacher praised him and gave him a bit of snack. Then she asked again what he saw on the way to school. He answered, "A doggie." At this point, the teacher raised her eyebrows, cocked her head, and waited. Presently the child amended his answer: "A German shepherd doggie," and was praised and fed.

When the original question was asked again, with the reply, "A German shepherd doggie," the child was given a second prompt; the teacher asked what the doggie was doing. In this way the training proceeded, with the teacher prompting each logical step, waiting for all previous steps to be chained together in reasonable sequence, and reinforcing only increasingly long and meaningfully connected sequences. The child's average answer to this first question eventually rose to about 200 words per ten-minute session, which amounted to about 50 words per session if duplications were eliminated.

Then the teacher asked a new question, "What do you do when you go home from school?" The child's answer showed that he had profited from the training on the first question; therefore the teacher reduced her logical prompts and asked simply, "what else" or "what then," while continuing to dispense prasie and snacks only for more and more elaborate phrases.

IMITATION

UNIT 6

BEHAVIOR PROBLEMS

A. EXTINGUISHING SELF-DESTRUCTI

OBJECTIVE: To reduce self-destructive behavior by a combination of techniques; nonreinforcement of problem behavior and positive reinforcement of appropriate behavior.

PREREQU

INSTRUCTIONAL METHODS

1. Observe child over a period of time long enough to obtain a stable base line indicating frequency of selected problem behavior. 1.

2. Have available a means of controlling the time intervals between reinforcements (i.e., a universal timer). 2.

3. If the child exhibits the problem behavior, the teacher turns attention away from the child and returns the attention immediately when appropriate behavior begins (behavior incompatible with problem behavior). 3.

4. When the problem behavior ceases, the teacher reinforces the appropriate behavior with a primary reinforcer and timing begins. 4.

5. Gradually extend interval of time between the primary reinforcements (e.g. reinforce at 1st second, 3rd second, 5th second, etc.). 5.

BEHAVIOR PROBLEMS

A. EXTINGUISHING SELF-DESTRUCTIVE BEHAVIOR

ce self-destructive
by a combination of
ues; nonreinforcement
lem behavior and posi-
nforcement of appro-
behavior.

PREREQUISITE(S):
1) Must be able to visually attend.
2) Must have voluntary control of upper extremities.

CTIONAL METHODS	LEARNING ACTIVITIES
ver a period of time long a stable base line uency of selected problem	1. Not applicable.
a means of controlling the between reinforcements sal timer).	2. Not applicable.
nibits the problem eacher turns attention hild and returns the iately when appropriate (behavior incompatible navior).	3. The child will learn that the self-destructive behavior will not be rewarded.
n behavior ceases, the ces the appropriate primary reinforcer and	4. When appropriate behavior is exhibited, the child is rewarded.
d interval of time between nforcements (e.g. reinforce 3rd second, 5th second, etc.).	5. The child will associate the action with the problem behavior situation.

INSTRUCTIONAL METHODS

6. When the child resumes the problem behavior, the teacher immediately turns away to avoid reinforcing the crisis (problem) behavior with her attention. 6. ---

7. When problem behavior ceases, teacher immediately returns her attention to child but demands a longer period of nonoccurrence before beginning the primary reinforcement (i.e., 3 or 4 sec.). The reinforcement continues at lengthening intervals as nonoccurrence of problem behavior persists. 7. ---

8. For evaluation purposes it is helpful if throughout the proceedings a record can be kept of the gradually extended intervals of nonoccurrence of the crisis behavior until the objective is achieved. 8. ---

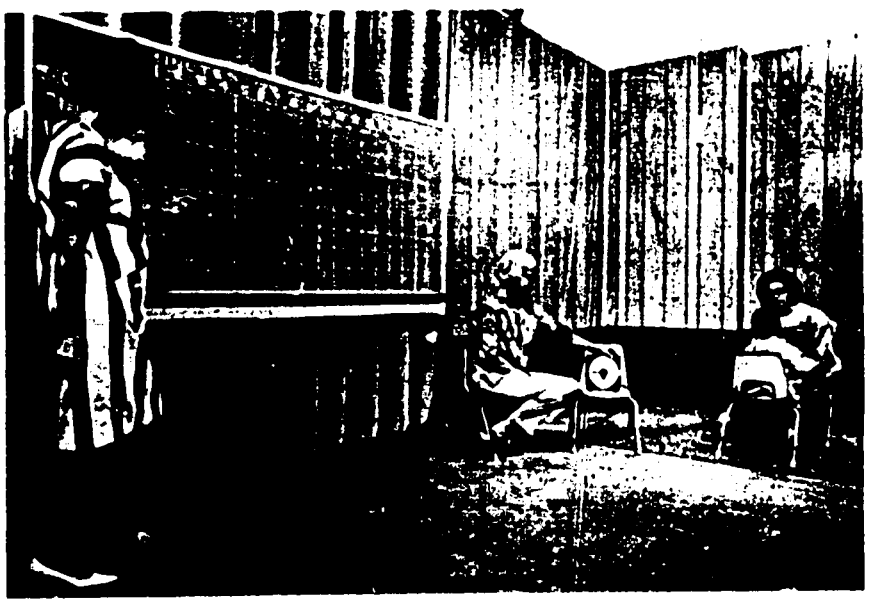
9. The goal is to have the teacher gradually fade herself out, thus eliminating the primary and the social reinforcement, so that the control of the crisis behavior is not dependent on the teacher's physical presence. 9. Th pe

10. When the problem behavior is extinguished by this technique, other aspects of the teaching program can be approached. 10. No ti

UCTIVE BEHAVIOR (Cont'd.)

NAL METHODS	LEARNING ACTIVITIES
es the problem behavior, ely turns away to avoid is (problem) behavior	6. ----------
r ceases, teacher her attention to longer period of beginning the pri- i.e., 3 or 4 sec.). ntinues at lengthening rrence of problem	7. ----------
ses it is helpful if eedings a record can ally extended intervals the crisis behavior is achieved.	8. ----------
the teacher gradually nus eliminating the ial reinforcement, so the crisis behavior the teacher's physical	9. The child is not motivated to perform problem behavior.
navior is extinguished other aspects of the n be approached.	10. Now a variety of learning activities can be carried out.

1.



Observe the child over a period of time, to obtain a stable base. (Note Universal timer.)

2.

Teacher turn
child, retur
when the app
Extinction t

3.

Child sitting quietly with hands still -- immediate behavior objective achieved.

Teacher returns her attention to child but demands a longer period of non-occurrence before beginning the primary reinforcement.

4.

Have availab
the time int
ments.

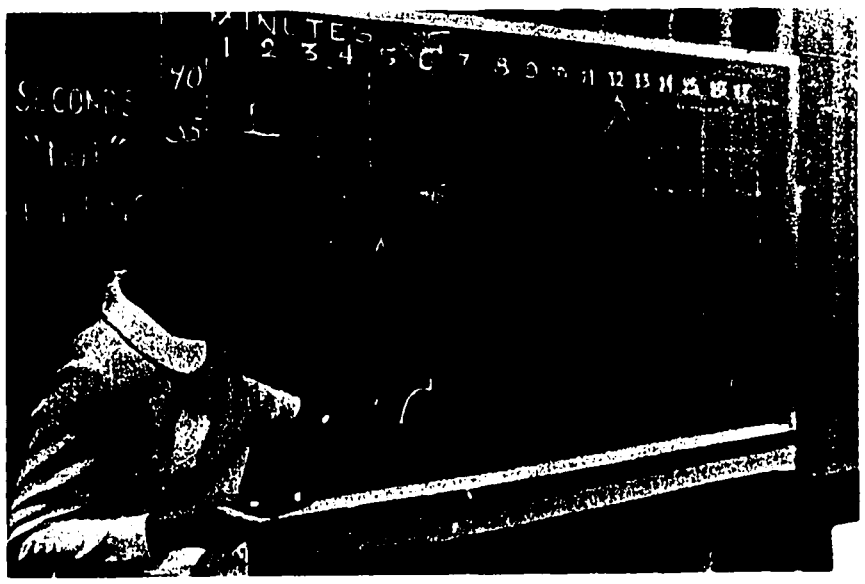
riod of time,
Note Universal

2.

Teacher turns her attention away from the child, returning the attention immediately when the appropriate behavior begins. Extinction technique.

on to child
of non-

4.



Have available a means of controlling the time intervals between reinforcements.

NARRATIVE

Jill is a 5-year, 4-month old child who spends
head with her hands. Her mother is attempting to elim
mealtime by withholding her food until her hands are h
is also working with Jill on feeding herself with a sp
herself.

Our objective, then, was to get Jill to sit fo
her head with her hands. We hoped to accomplish this
combined with positive reinforcement for nonoccurrence
while the head-hitting occurred, the teacher turned aw
until the incompatible behavior (nonhead-hitting) bega
food reward starting with a one second interval, gradu
of time before giving the reinforcements.

A Universal timer was used in giving us contro
forcement. One person operated the clock and cued the
primary reinforcement.

During the procedure a chart-record was kept o
minute when Jill was not hitting her head. A line dra
corresponding with the chart markings showed a definit
not hit her head by the final minute of the procedure.

is a 5-year, 4-month old child who spends most of her time hitting her
r hands. Her mother is attempting to eliminate her head-hitting during
withholding her food until her hands are held quietly in her lap. She
ing with Jill on feeding herself with a spoon--getting her to reinforce

objective, then, was to get Jill to sit for 30 seconds without hitting
h her hands. We hoped to accomplish this through an extinction technique
h positive reinforcement for nonoccurrence of the head-hitting. When or
ad-hitting occurred, the teacher turned away--imposing a time-out period
compatible behavior (nonhead-hitting) began--this was reinforced with a
starting with a one second interval, gradually lengthening the intervals
re giving the reinforcements.

iversal timer was used in giving us control over the timing of the rein-
One person operated the clock and cued the teacher when to give the
forcement.

ng the procedure a chart-record was kept of the number of seconds per
Jill was not hitting her head. A line drawn across the chart and
g with the chart markings showed a definite rise in the time Jill did
head by the final minute of the procedure.

EXTINGUISHING SELF-DESTRUCTIVE BEHA

INSTRUCTIONAL LEVELS

1. Describe how this unit will be useful in dealing with

   a. Immediate steps are necessary to reduce this type
      the child on the road to developmental tasks.
   b. Basically the modification of behavior is essenti
      and attention to the surrounding environment.
   c. To be self-controlled and socially acceptable.
   d. To begin steps toward regularity in daily persona
   e. To accept gradual steps of responsibility in the
      neighborhood.
   f. To establish rapport, communication, and useful p
      and motor skills.

2. Describe how this unit will be useful in stimulating

   a. Pursuit of "Means" to learn steps involving, -
      -- Rapport, happiness, and success within group o
      -- Opportunities to receive inputs through sensor
         seeing, hearing, touch, etc.
      -- Conceptualizing intake,
      -- Responding through singing, talking, verbalizi
   b. Initial areas of orientation, contact, attention,
      interest involvement and reinforcement.

3. Describe how this unit will contribute to modeling an

   This may be considered as a practice in self-destruct
   degree of boredom within the environment. - Areas o
   in an incidental fashion may be limited. - Establis
   expand the use of patterns in modeling and imitation.

4. Is this unit's theoretical orientation direct or indi

   This theory is based on direct behavior modification
   Management and Skinnerian Operant Conditioning.

EXTINGUISHING SELF-DESTRUCTIVE BEHAVIOR

INSTRUCTIONAL LEVELS

his unit will be useful in dealing with behavioral change.

steps are necessary to reduce this type of crisis behavior and get
on the road to developmental tasks.
the modification of behavior is essential to establish orientation
ion to the surrounding environment.
-controlled and socially acceptable.
teps toward regularity in daily personal life.
gradual steps of responsibility in the home, in school and in the
od.
sh rapport, communication, and useful progress toward self-help
skills.

his unit will be useful in stimulating action and arousal.

"Means" to learn steps involving, -
, happiness, and success within group or environment,
nities to receive inputs through sensory modalities, i.e.,
hearing, touch, etc.
ualizing intake,
ing through singing, talking, verbalizing,
eas of orientation, contact, attention, sensory-motor integration,
nvolvement and reinforcement.

his unit will contribute to modeling and imitation.

nsidered as a practice in self-destruction that indicates a basic
dom within the environment. - Areas of modeling and imitation
al fashion may be limited. - Establishment of self-control will
of patterns in modeling and imitation.

theoretical orientation direct or indirect? Explain.

based on direct behavior modification established by Crisis
S erian Operant Conditioning.

INSTRUCTIONAL LEVELS (Cont'd.)

5. Is the unit's theoretical orientation (1) Cognitive (2) Behavioral (3) Eclectic? Explain.

It is Eclectic because it encompasses both the beha

Behavioral	Cognitive
Ocular control	Perception (recognit
Inhibition	Readiness
Imitation	Association
Self-destruction	Memory

6. Describe how the unit provides for the transfer of

Only if technique is used in a variety of settings securely established.

7. Describe how this unit relates to other training a

After establishing a modicum of self-control and m be given precision training in directed practice o

Particular and precise training in getting on and Making use of gross areas of arms and legs and han of a personal-need type.

8. Describe how this unit might be affected by the in or personality.

Items that lead to good teaching techniques in beh
a. Establish a base rate of overt behavior in the
b. Instructor avoids any technique that may reinf behavior.
c. Checks for variation of base rate of behavior or "changes of environment."
d. Instructor always uses positive methods of obj measurement and rewards.

LS (Cont'd.)

theoretical orientation (1) Cognitive, (2) Behavioral, or
Explain.

because it encompasses both the behavioral and cognitive areas.

Cognitive
Perception (recognition and discrimination)
Readiness
Association
on Memory

he unit provides for the transfer of training.

que is used in a variety of settings may transfer of training be
lished.

his unit relates to other training areas.

shing a modicum of self-control and motor inhibition, the child will
ision training in directed practice of a motor response nature.

d precise training in getting on and off the bus independently.
gross areas of arms and legs and hand-eye manipulative skills
-need type.

his unit might be affected by the instructor's teaching technique
y.

ad to good teaching techniques in behavior modification:
a base rate of overt behavior in the child.
r avoids any technique that may reinforce or trigger the problem

r variation of base rate of behavior at various times of the day
es of environment."
r always uses positive methods of objectivity, observation,
nt and rewards.

COMMENTS: Extinguishing Self

This instructional plan provides a sup
modification in action. The descriptive mater
procedural details and requires no further cla
however, is the bearing of this program on The
Factors. The procedure violates time honored
both of these factors.

In the social context of the everyday
against the implementation of this program. T
education suggests that Jill is an "emotionall
problem. It assumes that this "inside the hea
must be the focus of therapeutic effort. In o
badly toward herself, presumably she will no l
head-hitting. The present strategy violates a
bypasses the so-called internal mental problem
forcement practices.

The theoretical question is only part
if not more important, is the subjective impac
the teacher and other adults. This behavior i
away from the child in the process of hitting
precisely counter to those sympathetic feeling
into teaching in the first place. These are d
the unit successfully demonstrated was that in
one must overtly express positive feelings sel
one must become cold and detached. Rather, it
understanding and self-discipline required to
for such expression. This problem is compounde
order to inaugurate the program, must gain the
the parents and other significant people in the
aides and other students. She must understand
this understanding to others. Fortunately, the
procedure provides her with a means for conclus

COMMENTS: Extinguishing Self-Destructive Behavior

tructional plan provides a superb demonstration of behavior
action. The descriptive material covers all of the important
ls and requires no further clarification. What is left unsaid,
bearing of this program on Theoretical Orientation and Subjective
ocedure violates time honored and cherished notions regarding
ctors.

ocial context of the everyday world, everything would operate
ementation of this program. The general folklore of special
ts that Jill is an "emotionally disturbed" child with a "mental"
umes that this "inside the head" problem of "negative self-concept"
s of therapeutic effort. In other words, if she stops feeling
self, presumably she will no longer need to punish herself with
he present strategy violates all of these notions in that it
called internal mental problem and focuses instead upon rein-
ces.

retical question is only part of the problem, however. Equally,
rtant, is the subjective impact of self-destructive behavior on
other adults. This behavior is bizzare and disturbing. Turning
ild in the process of hitting herself is an action that goes
r to those sympathetic feelings that motivate many people to go
the first place. These are decent, humane impulses. Yet, what
fully demonstrated was that in dealing with this kind of problem,
express positive feelings selectively. This does not imply that
cold and detached. Rather, it means that one must develop the
d self-discipline required to discriminate the appropriate moment
ion. This problem is compounded by the fact that the teacher, in
ate the program, must gain the active support of her supervisor,
other significant people in the environment including teaching
students. She must understand what she is doing and communicate
ng to others. Fortunately, the evaluation system built into the
es her with a means for conclusively demonstrating its success.

COMMENTS (Cont'd.)

Hostile critics cannot long ignore such evidence. They may, however, attack the program on other grounds. For example, they may claim that it works but at the cost of a presumed psychic damage or side effect. The teacher can then counter with the demand for proof that damage of this kind ever occurs.

The preceding discussion points up, once again, an important fact about instructional objectives, i.e., it is one thing to specify an objective and to delineate a successful strategy for achieving it, it is quite another thing to implement it in the real world.

For further discussion on underlying theories of treatment, refer to Section IV.

Thomas S. Ball

BEHAVIOR PROBLEMS

B. AGGRESSIVE BEHAV

OBJECTIVE: To illustrate to the child that his aggressive behavior deprives him from pleasureful and rewarding classroom activities. PRE

INSTRUCTIONAL METHODS

1. The problem behavior is charted until a stable base line is established. 1.

2. After establishing the base line, immediately upon demonstration of aggressive behavior, the child is removed by an adult who grasps the clothing at the shoulder, takes him to the seclusion area which is located away from the classroom. 2.

3. The child is left in seclusion for a preset time. At the end of the preset time, an adult will see if the behavior is appropriate before returning the child to classroom activity. 3.

4. Having displayed appropriate behavior, the child is returned to the classroom by an adult without giving any physical contact to the child so that the problem behavior is not reinforced. 4.

5. Seclusion for problem or aggressive behavior needs to be consistently practiced and must be utilized as often as necessary until objective is obtained.

6. Objective is achieved, i.e., in comparison with the base line, the rate of the agressive behavior is significantly reduced.

BEHAVIOR PROBLEMS

B. AGGRESSIVE BEHAVIOR

o illustrate to the child
hat his aggressive behavior
eprives him from pleasureful
nd rewarding classroom activities.

PREREQUISITE: Able to hear, follow direction, control fine motor skills.

STRUCTIONAL METHODS

em behavior is charted until
base line is established.

ablishing the base line,
ly upon demonstration of
e behavior, the child is
y an adult who grasps the
at the shoulder, takes him
clusion area which is lo-
y from the classroom.

is left in seclusion for
time. At the end of the
me, an adult will see if
ior is appropriate before
the child to classroom

splayed appropriate behavior,
is returned to the classroom
lt without giving any physical
o the child so that the problem
is not reinforced.

for problem or aggressive
needs to be consistently
and must be utilized as
necessary until objective
ed.

is achieved, i.e., in comparison
b ine, the rate of the agres-
v s significantly reduced.

LEARNING ACTIVITIES

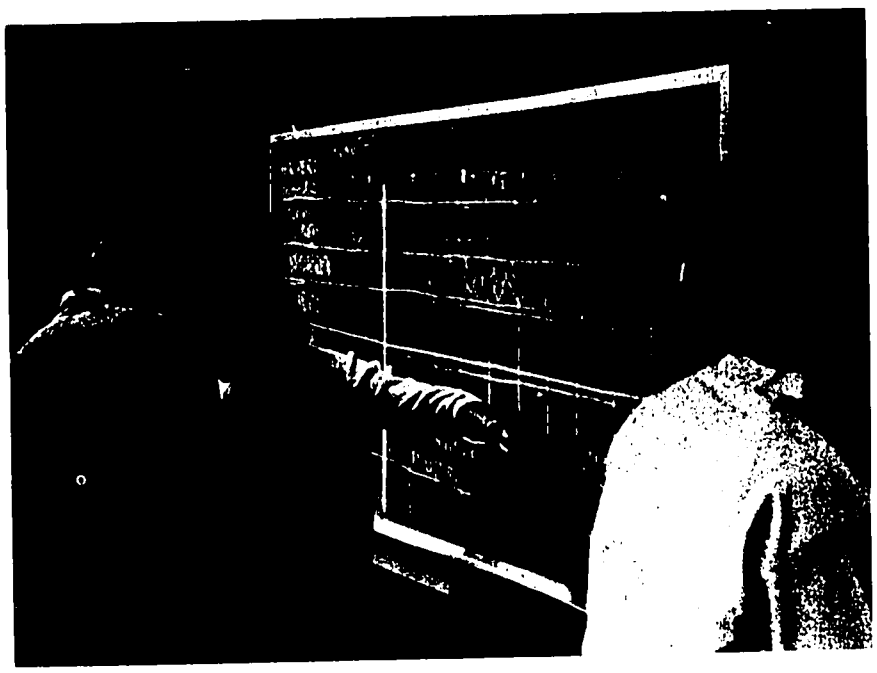
1. Not applicable.

2. When a child has a problem behavior,

3. The child will learn that problem behavior means seclusion.

4. When appropriate behavior is established, the child will be returned to the group.

1.

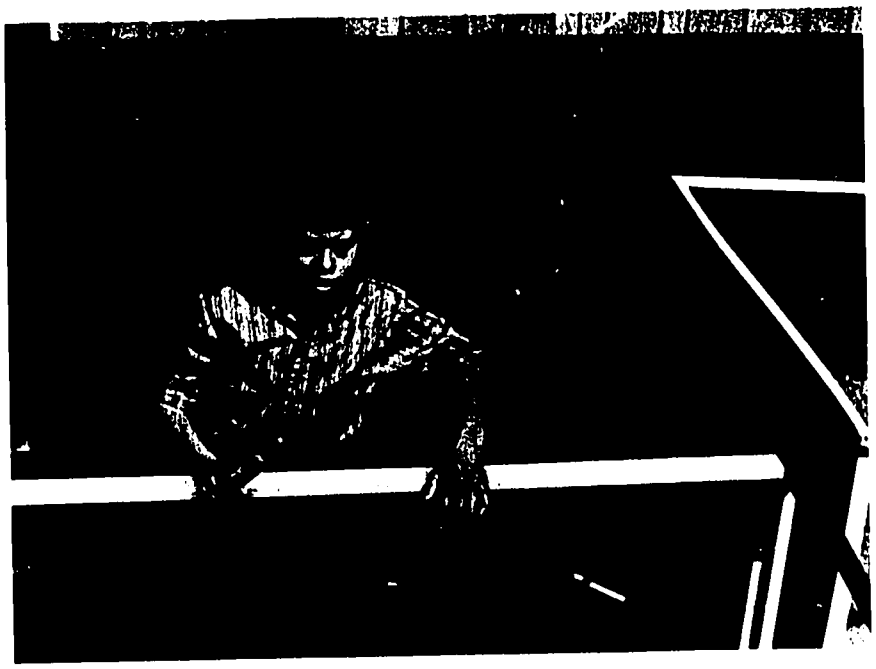


Problem behavior is charted until a stable base line is established.

2.

The ch
should
the cl
verbal

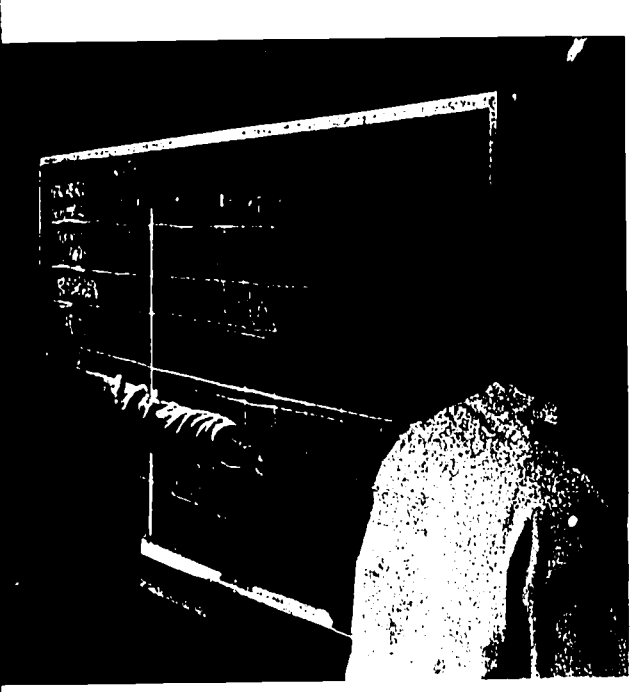
3.



The child is left in seclusion for a preset period of time.

4.

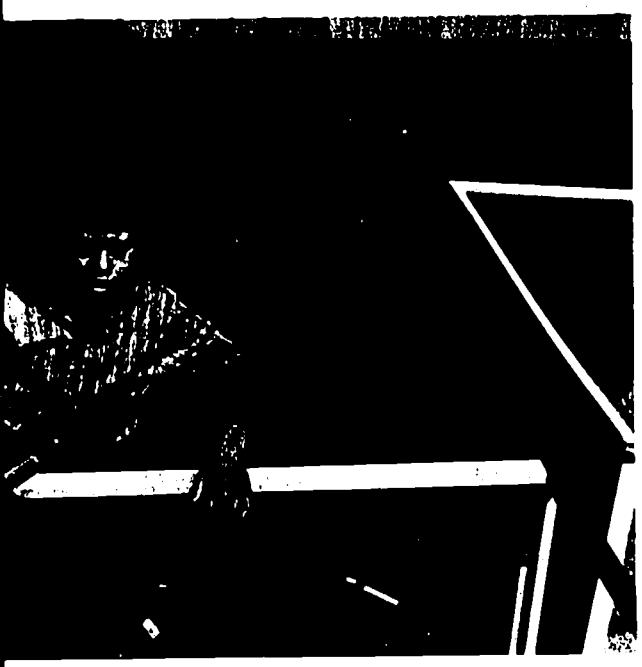
Havin
child



vior is charted until a stable
established.

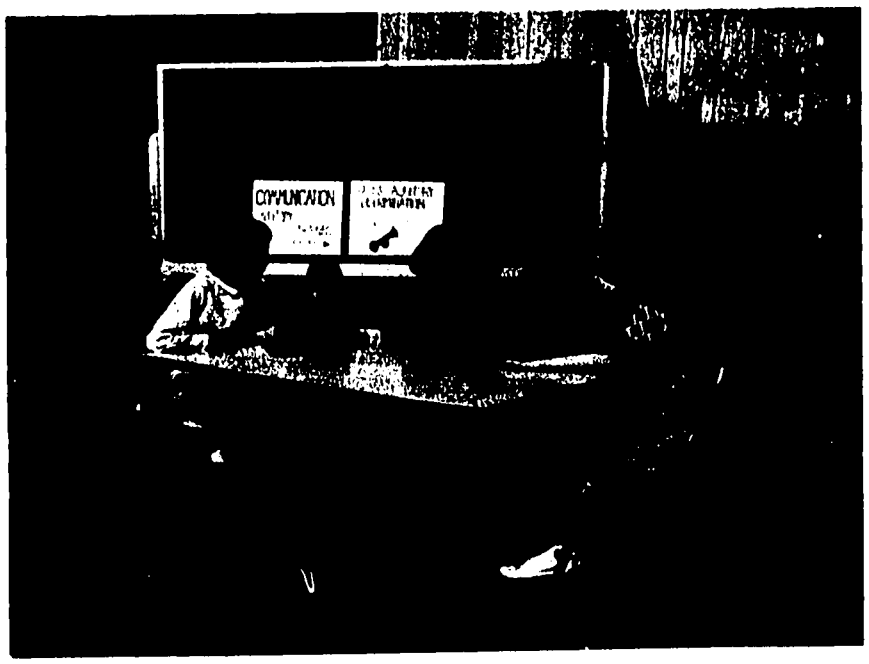
2.

The child is grasped by the clothing at the shoulder and is impersonally removed from the classroom to the seclusion area without verbalization.



left in seclusion for a preset
me

4.



Having displayed appropriate behavior, the child is returned to the classroom.

BEHAVIOR PROBLEMS: AGGRESSIVE BEH

INSTRUCTIONAL LEVELS

1. Describe how this unit will be useful in dealing with

   Seclusion is a definite action by which aggressive be

2. Describe how this unit will be useful in stimulating

   Rather than stimulating action and arousal, seclusion
   sive behavior, thus allowing the child to become more
   in appropriate classroom behaviors.

3. Describe how this unit will contribute to modeling an

   Model of increasing nonaggressive behavior is rewardi
   to participate in the activity which has been denied

4. Is this unit's theoretical orientation direct or indi

   It is direct. It is nonverbal and also an interventi

5. Is the unit's theoretical oreintation (1) behaviorist
   (3) eclectic? Explain.

   The theoretical orientation is behavioristic. It is
   with seclusion being a negative reinforcer which incr
   aggressive behavior--also, the action is observable a

6. Describe how the unit provides for the transfer of tr

   Aggressive behavior is associated with seclusion; the
   appropriately to avoid a negative reinforcer in other
   can be obtained if seclusion is used with consistency

unit will be useful in dealing with behavioral change.

finite action by which aggressive behavior is decreased.

unit will be useful in stimulating action and arousal.

lating action and arousal, seclusion is designed to limit aggres-
us allowing the child to become more open to action and arousal
assroom behaviors.

unit will contribute to modeling and imitation.

ng nonaggressive behavior is rewarding as children can continue
the activity which has been denied to the secluded child.

eoretical orientation direct or indirect? Explain.

is nonverbal and also an intervention disciplinary technique.

oretical oreintation (1) behavioristic, (2) congnitive, or
olain.

rientation is behavioristic. It is based on behavior theory
ing a negative reinforcer which increases periods of nonoccurring
or--also, the action is observable and measurable.

unit provides for the transfer of training.

or is associated with seclusion; therefore, the child behaves
avoid a negative reinforcer in other settings. This result
f seclusion is used with consistency.

INSTRUCTIONAL LEVELS (Cont'd.)

7. Describe how this unit relates to other trainin

With the continued use of this seclusion techni behavior so that the teacher can maintain her t benefit.

8. Describe how this unit might be affected by th or personality.

The teacher needs to be consistent, utilizing uncontrolled personality variables and inappro cause this method to become ineffectual. Some that they feel that this technique is liable t and create negative feelings or aloneness. In that as soon as acceptable behavior is demonst the child is immediately returned to the situa prolonged, indefinite, or unplanned--it must b

ont'd.)

nit relates to other training areas.

use of this seclusion technique, we can extinguish aggressive
e teacher can maintain her total program for the child's

nit might be affected by the instructor's teaching technique

to be consistent, utilizing minimal verbalization, otherwise
nality variables and inappropriate techniques are liable to
to become ineffectual. Some teachers object to seclusion in
t this technique is liable to destroy the child's self-image
e feelings or aloneness. In view of this, it should be stressed
ceptable behavior is demonstrated for a preset period of time,
iately returned to the situation. Seclusion should never be
ite, or unplanned--it must be programmed.

COMMENTS: Aggressive

This program was based upon a well establ
known as "time out from positive reinforcement."
and executed. It was evaluated in an objective f
base line, the rate of aggressive behavior was si
collected, this kind of data is not readily subje
of interpretation.

A factor with which the teachers were awa
specifically in the program deals with the reinfo
fact is that, for some individuals, seclusion car
rather than as time out from positive reinforceme
a serious problem for the teacher since the rate
crease in frequency over base line. This informa
forward indication that if the program is not wo
be devised.

The authors of the program perceptively
tional Levels) that the variable of Subjective Fa
instance. They observed, "Some teachers object
technique is liable to destroy the child's self-
or loneliness." It is important to note, howeve
unfavorable side effects constitute speculation,
to support the notion of side effects. The prob
than the student. Yet since it is the teacher w
out the program, such problems cannot be ignored
that she attaches to the term seclusion, which,
connotations, must be thoroughly discussed. Per
overcome by placing the child in a "concentratio
"extraneous stimuli serving to elicit the behavi
the procedure may "sell" much better.

The term seclusion may be reacted to wit
other hand, there is no doubt that it can be ser
key to its correct usage was aptly and succinctl
"Seclusion should never be prolonged, indefinite
Guided by the data collection procedure as outli
will not occur.

COMMENTS: Aggressive Behavior

ram was based upon a well established operant conditioning procedure
t from positive reinforcement." The program was carefully conceived
was evaluated in an objective fashion, i.e., in comparison with the
te of aggressive behavior was significantly reduced. When honestly
ind of data is not readily subject to distortion during the process
.

with which the teachers were aware but which was not brought out
he program deals with the reinforcing properties of seclusion. The
some individuals, seclusion can function as a rewarding experience
me out from positive reinforcement. Yet, this need not constitute
for the teacher since the rate measure will readily reveal an in-
cy over base line. This information provides a reliable, straight-
n that if the program is not working, an alternative strategy should

rs of the program perceptively indicated under point #8 (Instruc-
at the variable of Subjective Factors is of great relevance in this
bserved, "Some teachers object to seclusion in that they feel this
le to destroy the child's self-image and create negative feelings
It is important to note, however, that these concerns about potential
effects constitute speculation, not fact. There is really no evidence
tion of side effects. The problem may reside in the teacher rather
Yet since it is the teacher who decides whether or not to carry
such problems cannot be ignored. The feelings and value judgments
to the term seclusion, which, from the outset, has very negative
t be thoroughly discussed. Perhaps the semantic obstacle could be
ng the child in a "concentration booth" designed to eliminate
li serving to elicit the behavior." With this kind of repackaging,
"sell" much better.

seclusion may be reacted to with a negative emotional bias. On the
is no doubt that it can be seriously abused as a procedure. The
t usage was aptly and succinctly summarized in the statement,
never be prolonged, indefinite, or unplanned--it must be programmed."
a collection procedure as outlined in this plan, abuses of seclusion

BEHAVIOR PROBLEM

C. BLINDISM

OBJECTIVE: The student will be able to hold her head in an upright position.

PREREQUI

INSTRUCTIONAL METHODS

1.	Observe the student in a home situation to attain a "natural setting" base line for frequency of problem behavior (head held in a slumped position).	1. Not
2.	Seek information from the mother concerning types of rewards and whether there are any obstacles to resolving the problem. (Music found to be most rewarding.)	2. Not
3.	Set up two timers. One to run continuously for a period of two minutes, the other to measure the amount of time her head attains the upright position within the two-minute period. Have a scoring board to score the results of the timers.	3. Not
4.	Bring the student into the training room having a phonograph and records ready. Scorepad and timers are also to be ready.	4. Not
5.	Timers started. If the student's head is down, the music remains off. When she begins to bring her head up, the music begins. The music is started with any upward movement. If her head begins to go down, the music stops. No verbalization at this time.	5. Whe mus be

BEHAVIOR PROBLEMS

C. BLINDISM

nt will be able to
head in an upright

PREREQUISITE(S): Must not have any physical obstacle to holding neck in upright position.

NAL METHODS

LEARNING ACTIVITIES

nt in a home
in a "natural
e for frequency
or (head held in
n).

1. Not applicable.

from the mother
of rewards and
any obstacles to
blem. (Music found
ing.)

2. Not applicable.

. One to run
a period of two
r to measure the
r head attains the
within the two-minute
coring board to score
e timers.

3. Not applicable.

into the training
nograph and records
and timers are also

4. Not applicable.

If the student's
music remains off.
o bring her head up,
The music is started
ovement. If her head
, the music stops.
at this time.

5. When the student lifts her head, the music will start and the child will be rewarded.

6. Amount of time the head is held up will be scored on chart. Five 2-minute sequences will be scored.

7. At this time begin to associate physical contact with music by rubbing the shoulder or holding a hand when the music starts (social approval). Association of physical contact is made in view of eventually withdrawing the primary (music) reward. Five 2-minute sequences are scored.

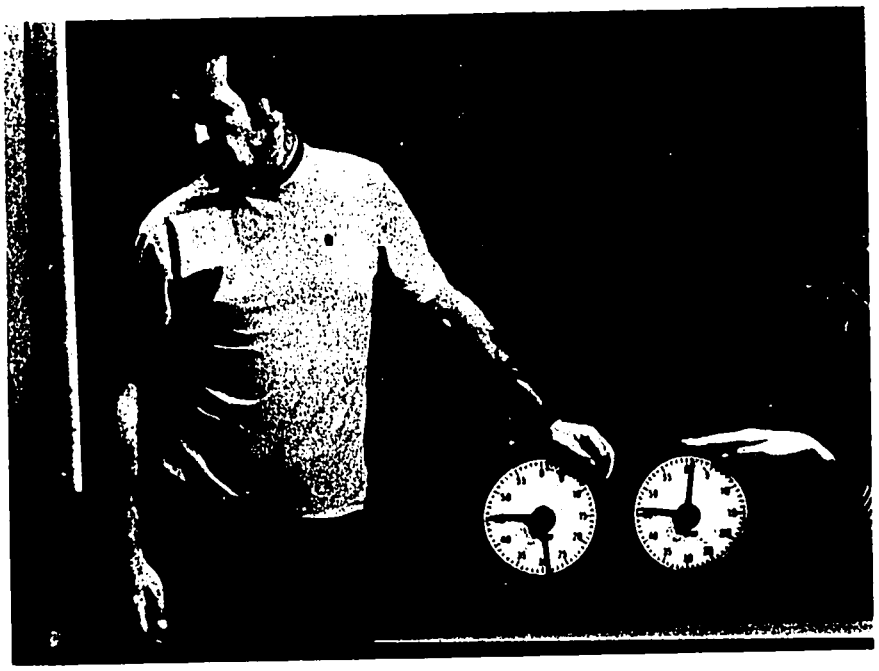
8. In another five 2-minute sequences (scored), the music is deleted and social praise (verbal and stroking) is associated with physical contact if the student keeps head in an upright position.

* 9. Delete all physical contact and use just social reward of conversation commenting that it is nicer to keep head up. Five 2-minute sequences are scored.

* At this time this step was deleted and we returned to step 7 as it was obvious that the student was not responding as readily without the music.

TRUCTIONAL METHODS	LEARNING ACTIVITIES
me the head is held up ed on chart. Five 2- nces will be scored.	6. The student will begin to associate reward of music playing with having head in an upright position.
begin to associate tact with music by rubbing or holding a hand when the (social approval). Asso- hysical contact is made in tually withdrawing the ic) reward. Five 2-minute e scored.	7. The student will begin to associate physical contact and music with the head being in an upright position.
ive 2-minute sequences e music is deleted and e (verbal and stroking) d with physical contact nt keeps head in an upright	8. The student will be associating social praise with physical contact as the reward to keeping her head in an upright position.
hysical contact and use reward of conversation hat it is nicer to keep ve 2-minute sequences	9. The student should associate meaningful communication as an incentive to keeping her head in an upright position.
	10. Over-all result: The scoring tabulation revealed that the student may not have had complete association of the reward to the fact of having her head in an upright position, but it was observable that the music and music-physical contact stages had more time periods of association. Had this been brought out over a longer period of time, the association and behavior change would have been much more effective. See concluding interpretation of the results under Comments.
is step was deleted and step 7 as it was obvious t was not responding as the music.	

1.



2.

Timers started. Any upward movement, the music starts. If head begins to go down, music stops. No verbalization at this time.

3.

4.

The child has her head in upright position and is receiving physical contact as means of a reward which has been associated with the primary reward of music.

M
u
a

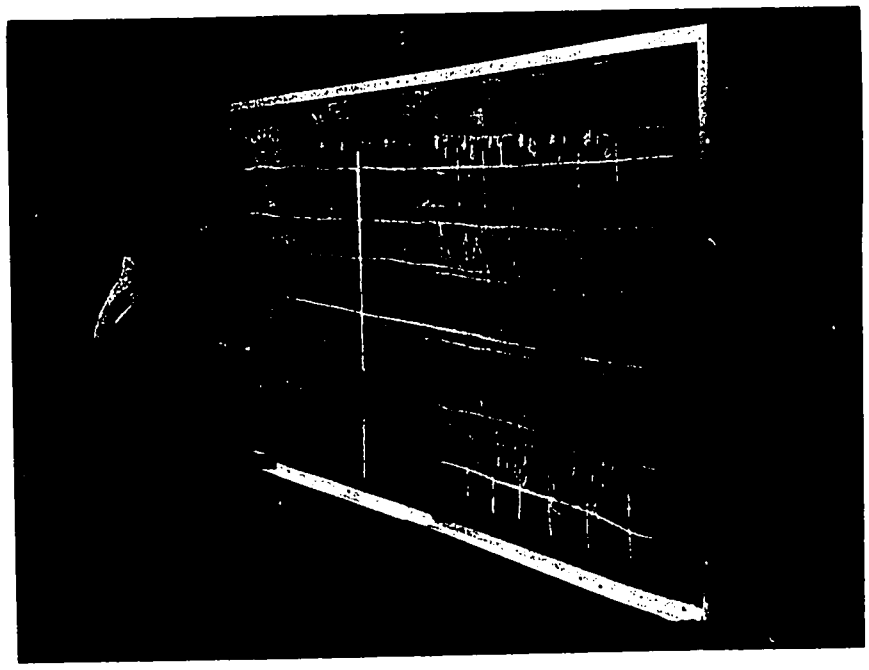
upward movement, the
ad begins to go down,
balization at this time.

2.

When head is down, music remains off.

ead in upright position
ysical contact as means
as been associated with
of ic.

4.



Measure the amount of time her head attains upright position within the 2-minute period and record on chart.

NARRATIVE

Jenny is a 17-year old blind/cerebral palsied
Jenny sits in a slumped, withdrawn position with her
Although she exhibits other blindisms--rocking, rubbi
the mother feels that Jenny's keeping her head down r
position is crisis behavior as it interferes with her
youngster. The head-down position also limits her mo
spacial relationships, availability of environmental
in educational experiences.

In successive approximations, Jenny is reward
in an elevated position. Using two Universal timers,
measured at 2-minute intervals are conducted as: Sta
Stage II - music associated with physical contact, St
associated with social praise, and Stage IV - social

During the procedure a chart was kept of the
2-minute period that Jenny elevated her head. The si
is explained in the Comments that follow this unit.

-year old blind/cerebral palsied girl. As can be observed,
ed, withdrawn position with her head down on her chest.
other blindisms--rocking, rubbing her eye with her fist--
Jenny's keeping her head down rather than in an elevated
navior as it interferes with her relationship to the
down position also limits her mobility, development of
, availability of environmental stimuli, and participation
ences.

approximations, Jenny is rewarded for having her head up
on. Using two Universal timers, four 10-minute stages
intervals are conducted as: Stage I - music reinforcement,
ciated with physical contact, Stage III - physical contact
l praise, and Stage IV - social reinforcements only.

ocedure a chart was kept of the number of seconds per
Jenny elevated her head. The significance of the data
omments that follow this unit.

BEHAVIOR PROBLEMS: B

INSTRUCTIONAL LEV

1. Describe how this unit will be useful in deali

   a. The mother feels this is crisis behavior a
      to child.
   b. Modification of this behavior will aid in

2. Describe how this unit will be useful in stimu

   a. Having the head up and correct posture wil
      stimulation.
   b. She will not appear as withdrawn and she
      stimulation.
   c. Having her head up will also give her more
      allowing for a vertical rather than a hori
   d. Increased mobility will allow for more exp
   e. Increased mobility will allow for more edu

3. Describe how this unit will contribute to mode

   a. No modeling or imitation was used.
   b. It could be done through tactile stimulat
      also the model's head as to position and

4. Is this unit's theoretical orientation direct

   The unit's theoretical orientation was direct
   observable as well as measurable and the tech
   and mechanical requiring no involved interpre
   of 2 minutes of uninterrupted music, this wou
   ferent stages of the experiment in lieu of th
   would not be contingent upon the desired beha

BEHAVIOR PROBLEMS: BLINDISM

INSTRUCTIONAL LEVELS

this unit will be useful in dealing with behavioral change.

er feels this is crisis behavior and interfers with her relationship

tion of this behavior will aid in achieving greater social acceptance.

this unit will be useful in stimulating action and arousal.

he head up and correct posture will give her more potential for
ion.
not appear as withdrawn and she will be more available for further
ion.
er head up will also give her more awareness of spacial relationships
for a vertical rather than a horizontal orientation.
d mobility will allow for more exploration of her environment.
d mobility will allow for more educational opportunities.

this unit will contribute to modeling and imitation.

ing or imitation was used.
be done through tactile stimulation by feeling her own head and
model's head as to position and posture.

's theoretical orientation direct or indirect? Explain.

heoretical orientation was direct. The behavior to be modified was
s well as measurable and the techniques for measurement were specific
al requiring no involved interpretation. By establishing a base line
of uninterrupted music, this would make it possible to see the dif-
s of the experiment in lieu of the "natural setting" of music which
contingent upon the desired behavior.

5. Is the unit's theoretical orientation (1) behavi (3) eclectic? Explain.

The theoretical orientation of this unit was beh verbally asked her to keep her head in the uprig shaping through behavioristic techniques. A beh head upright was attempted through rewarding des successive approximations and no direct cognitiv

6. Describe how the unit provides for the transfer

This unit had built-in transfer of training sinc with social rewards (combined touch and verbal t which were used as a means of eliciting the desi to get the rewards into a realistic everyday rei be more in style with the present social standar training would also take place once the head was posture would be more erect and usable.

7. Describe how this unit relates to other training

The skills and success developed through music, as reinforcements in this particular case, would operant conditioning.

Orientation to spacial relationships and improve result.

8. Describe how this unit might be affected by the or personality.

Behavior blindism can be very much affected by t These are some of the ways in which it can be af assistance, inability to wait and reward. The u tivity to the child's tolerance level and awaren of success.

al orientation (1) behavioristic, (2) cognitive, or

tion of this unit was behavioristic. We could have
eep her head in the upright position, but we attempted
ristic techniques. A behavior change of keeping the
ted through rewarding desirable behavior through
ns and no direct cognitive approach.

rovides for the transfer of training.

transfer of training since primary rewards were replaced
mbined touch and verbal to verbal praise without touch)
ans of eliciting the desired behavior. The intent was
a realistic everyday reinforcement system which would
he present social standards of behavior. Transfer of
e place once the head was in an upright position: body
rect and usable.

relates to other training areas.

developed through music, with physical and social praise
is particular case, would not be useful in all areas of

relationships and improvement in mobility would be the

might be affected by the teacher's teaching technique

e very much affected by the teacher and her techniques.
ays in which it can be affected: by giving too much
o wait and reward. The unit can be affected by sensi-
olerance level and awareness of appropriate degrees

EQUIPMENT LIST

2 Universal timers
Record player
Child's favorite record
(Dejavu-Crosby Stills Nash and Young)
2 chairs
Scoring chart
Felt pen

SUPPLIES LIST

Tagboard
Felt pen

BIBLIOGRA

"No Place
Hosp
P. O

Curriculu
Santa
Santa
701
Cali

Nothing r
with blin
papers an
modificat

FILMS, et

Sonoma St
(Poppy Pr
P. O. Box

EVALUATIV

1. Scori
2. Time

BIBLIOGRAPHY

"No Place To Go" - Pauline More, Sonoma State Hospital, HIP-Blind Project Report, P. O. Box 1400, Eldridge, California.

Nash and Young)

Curriculum Guide 2nd Annual Conference Report, Santa Cruz, 1969. Office of Education, Santa Cruz County Government Center, 701 Ocean Street, Room 200, Santa Cruz, California 95060.

Nothing really in this field dealing directly with blindism. The subject is covered in papers and books dealing directly with behavior modification.

FILMS, etc.

Sonoma State Hospital Blind Project,
(Poppy Project) State Dept. Education.
P. O. Box 1400, Eldridge, California 95431

EVALUATIVE TOOLS

1. Scoring chart
2. Time clocks

COMMENTS: Bli

A task force of institute participants v
found that music was a potent reinforcer.

This editor's suggestion of an operant c
normal head posture in this blind girl was insp
(1962) who successfully treated a patient suffe
use of contingent music reinforcement.

From the standpoint of operant conditio
social praise and physical contact, including ha
issue of the effectiveness of music as a reinfo
by the exhortation to the subject to keep her h
so. The teachers' need to include verbal direct
Ayllon (1963) encountered in his attempt at get
in a mental hospital setting. Thus, "Because th
of the consequences... the nurses regarded the
effect on the patient's behavior. The implicit
indispensable for learning is a part of present

Why did the conference participants inv
continuous personal interactions such as holdin
that holding her head up was desirable? It is
embellishments serve more to assuage the teache
of the subject than to enhance what was origina
forward strategy.

The editor's interpretation of the embe
by impressions gained from other sources. Thus
trainers of the blind and some psychologists st
similar objections were raised. One psychologi
on the grounds that it violated the "natural" d
posture. If the child were placed on a belly b
up "naturally" and in a fashion that would help
basic difference regarding strategy is analogou
havior therapists and psychoanalysts. The psyc
one's conflicts must precede and form the basis
as Bandura (1967) points out, there is no reaso
of behavioral change. The reverse sequence see
nature. The developmental sequence idea has so

COMMENTS: Blindism

ce of institute participants who visited the subject in her home as a potent reinforcer.

r's suggestion of an operant conditioning strategy for training e in this blind girl was inspired by a classic study by Barrett fully treated a patient suffering from multiple tics through the nusic reinforcement.

tandpoint of operant conditioning methodology, the addition of physical contact, including hand holding, could only obscure the tiveness of music as a reinforcer. The issue was further clouded to the subject to keep her head up because it was "nicer" to do need to include verbal directions is reminiscent of a problem ntered in his attempt at getting nurses to carry out a program al setting. Thus, "Because the patient was not informed or warned s... the nurses regarded the procedure as unlikely to have much ent's behavior. The implicit belief that verbal instructions are learning is a part of present day psychiatric lore."

e conference participants involved in this program want to arrange l interactions such as holding the girl's hand and persuading her ead up was desirable? It is suggested that such programmatic ve more to assuage the teachers' anxieties about their treatment h to enhance what was originally an extremely simple and straight-

's interpretation of the embellishments of the program are supported ned from other sources. Thus, in discussions with both orientation ind and some psychologists strongly identified with cognitive theory, were raised. One psychologist vehemently objected to the procedure t it violated the "natural" developmental approach to training head hild were placed on a belly board on the floor, her head would come in a fashion that would help orient her to the environment. This egarding strategy is analogous to conflicting views expressed by be- and psychoanalysts. The psychoanalysts would insist that insight into st precede and form the basis of meaningful behavioral change. But, points out, there is no reason why insight cannot follow upon the heels ge. The reverse sequence seems not to violate any immutable laws of opmental sequence idea has sometimes been invoked in support of

what have proven to be totally unfounded practices, a
that school age children with reading disabilities sh
crawling patterns (see Robbins, 1967). There appears
ing that Jenny be placed on a belly board than that a
time crawling about in stereotyped movement sequences

Just as behavior change can lead to insight,
conditioning this girl to develop a head posture whic
most alert, could result in a more generalized attent
lation. The procedure for producing this behavior wa
that it brought her to the threshold of a wider exper
environment. Once she was brought to this threshold,
highly variable and most unmechanistic world of exper
preting such a strategy is that many people recoil em
specifics of the initial stages of a conditioning pro
the goals toward which the behavior modifier is worki
that stating a behavioral objective may be nothing mo
the value issues that may surround it are unearthed a
fashion.

There is a postscript to this program. It st
in whch the editor described and interpreted the proc
mentation for automated treatment. For instrumentati
of a mercury switch attached to the head in such a fa
the head was held up and turn off when the head was l
activate a unit that would transmit corresponding on-
player supplied with Jenny's favorite recordings. Th
reinforcement immediately contingent upon the child's
posture.

Provided with nothing more than this informat
a psychologist responded to the suggested strategy a
package incorporating both a simplification of and a
over the original plan. MacLynn Smith utilized the
directly to an inexpensive transistor radio that the
A simple "bug" type earphone was connected to the ra
mitted her to wear the instrument package without bo
in fact, allowed to wear it at school. The total co
$2.00 exclusive of the cost of the transistor radio.

o be totally unfounded practices, as when Delacato (1959) insists
ildren with reading disabilities should practice rigidly prescribed
(see Robbins, 1967). There appears to be no more reason for insist-
placed on a belly board than that a 12-year old disabled reader spend
t in stereotyped movement sequences.

havior change can lead to insight, it seems quite possible that
girl to develop a head posture which she previously assumed when
result in a more generalized attentiveness to environmental stimu-
dure for producing this behavior was mechanistic. Yet it appears
r to the threshold of a wider experience and contact with the
she was brought to this threshold, the step beyond it was into a
d most unmechanistic world of experience. The problem in inter-
ategy is that many people recoil emotionally and criticize the
nitial stages of a conditioning procedure without understanding
hich the behavior modifier is working. The point in all of this is
avioral objective may be nothing more than a hollow formality unless
hat may surround it are unearthed and resolved in a constructive

postscript to this program. It stems from a video taped lecture
described and interpreted the program and also discussed instru-
mated treatment. For instrumentation, the editor suggested the use
h attached to the head in such a fashion that it would go on when
up and turn off when the head was lowered. The switch would
at would transmit corresponding on-off signals controlling a record
th Jenny's favorite recordings. The system would provide music
diately contingent upon the child's assuming the desired head

ith nothing more than this information, a classroom teacher and
ponded to the suggested strategy and evolved an instrumental
ing both a simplification of and a highly significant improvement
plan. MacLynn Smith utilized the mercury switch but connected it
xpensive transistor radio that the subject carried on her person.
e earphone was connected to the radio, an arrangement which per-
the instrument package without bothering anyone else. She was,
o wear it at school. The total cost of this equipment was about
the cost of the transistor radio.

Informal observation indicates that when Jenny
indeed, effective in promoting normal head posture. A
investigation remains to be done.

ervation indicates that when Jenny wears this equipment, it is,
promoting normal head posture. A full-fledged scientific
s to be done.

SECTION III

A FRAMEWORK OF COMMUNICATION FOR EDUCATION

A FRAMEWORK OF COMMUNICATION FOR
OF PROFOUNDLY RETARDED AND MULTI-HA

The primary goals for the development of th
communication among the educators of the severely r
with a repertoire of techniques to solve behavioral
the basis of improving and disseminating techniques
cations follows.

Curriculum is often conceptualized in terms o
Few would suggest that curriculum and curriculum pl
education. These two elements along with the teach
effect on a student's progress within the school sy
sold short of its full implication, for in a broad
of education that concern the student.

In this context, then, curriculum can be th
numerous aspects of education interrelating with on
pose. The word "system" has found increased usage
past few years, but unfortunately the use of system
problem it attacks--poor definition and the breakdo
various elements of education.

Perhaps it is easier to look upon education
many aspects, people and procedures. But whether y
system or program, education still consists of proc
changes all directed towards the basic goal of pass
wishful thinking to imagine a large body of people
without some common language through which objectiv
groups and their efforts converged towards that com
organizational or systems analysis.

Systems analysis in the most rigorous sense
the elements or aspects of an organization (or syst
efforts of these elements into a whole. The key to
not how to make rules or methods more precise, but
between different elements of the system through an

A FRAMEWORK OF COMMUNICATION FOR THE EDUCATION OF PROFOUNDLY RETARDED AND MULTI-HANDICAPPED MINORS

y goals for the development of this guide were to promote increased g the educators of the severely retarded and provide those educators of techniques to solve behavioral problems. Since communication is ving and disseminating techniques, a short discussion of its impli-

is often conceptualized in terms of study or types of subject matter. that curriculum and curriculum planning are the only elements of two elements along with the teacher's influence have the most direct t's progress within the school system. However, curriculum is often full implication, for in a broad sense it involves all the aspects concern the student.

ntext, then, curriculum can be thought of as a system--that is, f education interrelating with one another towards a common pur- system" has found increased usage within educational circles in the t unfortunately the use of systems has suffered from the exact --poor definition and the breakdown in communication between the f education.

is easier to look upon education as an organization, with its le and procedures. But whether you use the words organization, education still consists of procedures, methods, policies and ted towards the basic goal of passing on knowledge. It would be to imagine a large body of people working towards a common goal n language through which objectives could be defined for various efforts converged towards that common goal. Thus, the need for systems analysis.

nalysis in the most rigorous sense means nothing more than studying spects of an organization (or system) in an attempt to converge the elements into a whole. The key to systems analysis, therefore, is ules or methods more precise, but how to improve the interaction elements of the system through an improved framework of communication.

Curriculum as a system involves many people and abilities. The student lies at the focal point is the curriculum designer to know the needs of eac probable that he will never meet all these students instructional method is best suited for each studen exposure to the vast numbers of lesson plans and cu How is the administrator to know which of the metho acceptable with regard to the established budget? tions have an implied answer--communication. But a realities of the educational community, this commun

In order for the educational community to l utilize its full potential, it is necessary that it This learning will call for evaluation of objective standards. At this point people often throw up the analysis" or something similar in denoting their co aspects of role definition and evaluation. But if then it would follow that it must first define itse amount of improvement achieved. To know where you been. This is the role of the system analyst--to l piece together their needs and abilities so as to

This curriculum guide offer specific "cookb needs of profoundly retarded children, along with tions that underlie these methods. While these ana not been developed by a systems analyst, they were do them. The problems of proper curriculum were b task groups, solutions identified and examined, an by step with many trade-offs being made.

Curriculum must be used that is relevant to requires that the needs of each student be known a suggest the need for an extensive diagnosis for ea the teacher in prescribing instructional methods. research related to development of the profoundly

---

1 A Title VI B Project, Behavioral Objectives for is attempting to provide a defined systematic a in education.

as a system involves many people with continuously changing needs
student lies at the focal point of curricular efforts. But how
esigner to know the needs of each student when in fact it is most
ll never meet all these students? How is the teacher to know which
d is best suited for each student when she can't possibly obtain
t numbers of lesson plans and curriculums that have been developed?
rator to know which of the methods selected by the teacher is
ard to the established budget? These and many other everyday ques-
ed answer--communication. But all too often, within the hectic
ucational community, this communication breaks down.[1]

r the educational community to learn how to solve its ills and
tential, it is necessary that it learn from its own experience.
call for evaluation of objectives, and this evaluation will require
point people often throw up their arms and cry "paralysis by
ing similar in denoting their concern over the apparent de-humanizing
inition and evaluation. But if education seeks to improve itself,
w that it must first define itself to determine the direction and
nt achieved. To know where you are going is to know where you have
role of the system analyst--to help those within an organization
r needs and abilities so as to function as an interacting whole.

ulum guide offer specific "cookbook" methods of dealing with the
retarded children, along with considerations of the many assump-
these methods. While these analytically developed methods have
by a systems analyst, they were done exactly as an analyst would
ems of proper curriculum were broken down systematically by the
ons identified and examined, and detailed methods developed step
rade-offs being made.

must be used that is relevant to each child or student. This
eeds of each student be known and understood. This would in turn
r an extensive diagnosis for each student--a diagnosis usable by
cribing instructional methods. Because of the broad base of
development of the profoundly retarded child, there is sparse

ject, Behavioral Objectives for Handicapped Children, Santa Cruz
provide a defined systematic approach to improve communication

continuity in the jargon and methods used by those interacting wit
parent, the teacher from last year, the clinician, and often the c
approach of this guide combined with the theoretical implications
partially solves these concerns and enhances necessary communicati

To isolate a general area of need is always easier than im
solution, the difference being the intervening detail. We all use
systems analysis in our everyday lives, all the way from selecting
to deciding when to go to bed. To think of such efforts as system
important, but to learn to extend this natural habit to the educat
does require some practice.

Most of us act according to some immediate or long-term ob
usually consider different ways of pursuing these objectives. Onc
that appears most promising, we use it in approaching our objectiv
ing this objective, we continuously evaluate whether or not the pa
have chosen is going to be effective in attaining that objective.
right now when you read this page--is this information improving y
using curriculum--and if not, should you pursue the alternatives c
TV or talking with your neighbor?

It is this analytical framework that helps to pinpoint pro
the use and evaluation of different (alternate) ways of attaining
This refined approach permits a converging basis for communicatio

By viewing education as a system which includes many diffe
various roles working towards a basic goal (education of the chil
for communication becomes mandatory. This framework, produced in
fashion based upon the needs and suggestions of those involved in
process, can become a powerful tool for improving the effectivene
educational program. For example, envision all the people with wh
interact regarding your role in education; how is it possible to
individual a perspective of how their efforts can constructively
local and general goals of education? On page 113 is a simple di
organizational structure of a program based upon interacting deci

With reference to the attached decision structure, this c
is providing the basis of operation for those decisions at levels
placing the activities of the teacher that stem from her decision
with all the decisions of others in the educational community, it
to develop a program structure or framework that relates to commu
just some formal organization chart.

and methods used by those interacting with the child--the last year, the clinician, and often the child himself. The mbined with the theoretical implications of each method ncerns and enhances necessary communication and continuity.

ral area of need is always easier than implementing a viable being the intervening detail. We all use the methods of veryday lives, all the way from selecting food for breakfast bed. To think of such efforts as systems analysis is not o extend this natural habit to the educational community e.

cording to some immediate or long-term objectives, and we ways of pursuing these objectives. Once we select a way ng, we use it in approaching our objective. While approach- ntinuously evaluate whether or not the particular way we e effective in attaining that objective. You are doing that is page--is this information improving your knowledge of ot, should you pursue the alternatives of going back to the eighbor?

cal framework that helps to pinpoint problems and permits different (alternate) ways of attaining those objectives. its a converging basis for communication.

on as a system which includes many different people with rds a basic goal (education of the child), a framework mandatory. This framework, produced in a systematic ds and suggestions of those involved in the education rful tool for improving the effectiveness of the entire example, envision all the people with whom you work or le in education; how is it possible to give to each f how their efforts can constructively contribute to the education? On page 113 is a simple diagram that suggests f a program based upon interacting decisions.

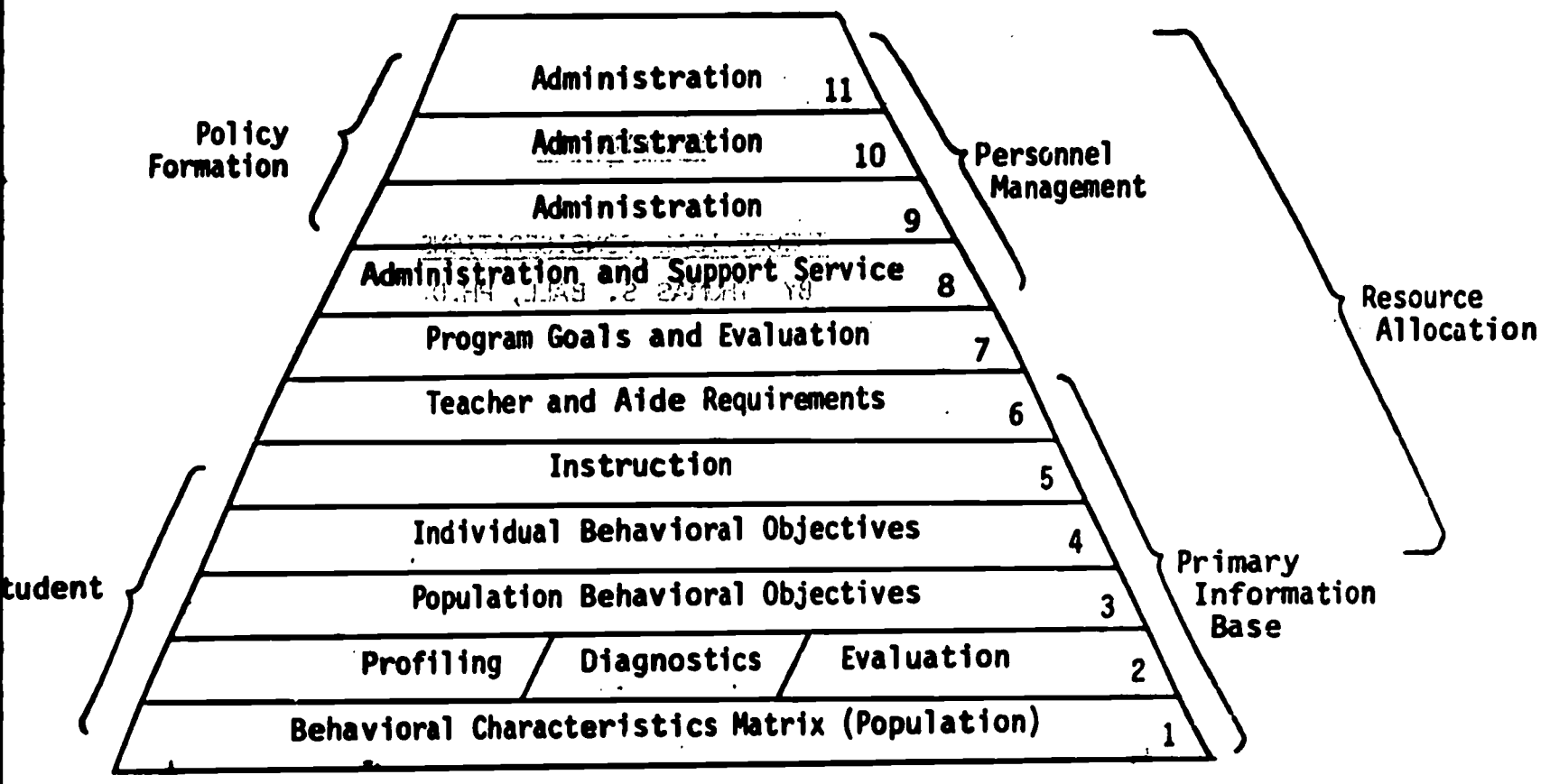
the attached decision structure, this curriculum guide operation for those decisions at levels 4 and 5. By the teacher that stem from her decisions in perspective others in the educational community, it is then possible ture or framework that relates to communication and not ion chart.

This framework as applied to a curricular system will help the teacher evaluate the curriculum content relative to individual student objectives, evaluate the objectives and finally aid the clinician in diagnosis of the child as objectives are attained. Such activities provide for education's learning about itself--all through a framework of communication.

For a more detailed discussion of this concept, its implications and supporting information, contact V.O.R.T. Corporation, Santa Cruz County Office of Education, Title VI B Project 44-00000-0000-723, Behavioral Objectives for Handicapped Children.

Thomas D. Holt

PROGRAM STRUCTURE: DECISION HIERARCHY



SECTION IV

THEORETICAL CONSIDERATIONS

BY THOMAS S. BALL, PH.D.

A PHILOSOPHY OF CURRICULUM PLANNING

FOR DEVELOPMENT CENTERS

Background of the Problem - Bloom's Taxonomy

In 1948, a group of psychologists interested in college level achievement testing met to discuss the difficulties of cooperating and communicating about work on educational evaluation. A major obstacle to such communication was the absence of a common frame of reference for discussion. To remedy this problem, they proposed to develop a taxonomy or classification system for educational objectives. They proposed to define such objectives in behavioral terms and to place them within an overall classification scheme. This scheme would have to incorporate a clear and meaningful terminology. Thus, "It was hoped that the statement of an objective in similar terms by different workers would make possible a definite classification of that objective and would also permit exact inferences about the kinds of behaviors expected of students." They added, "An even more important value we hoped to secure from the classification scheme was that of comparing and studying educational programs." (Krathwahl, et al, 1964, p. 5)

The next major step in the development of a taxonomy was that of establishing a three-fold division of educational objectives: cognitive, affective, and psychomotor. The following table (page 115) summarizes these three educational domains and the sequentially arranged objectives used to define them.

It was intended that this new taxonomy would represent more than a static classification. Rather, the ordering of educational outcomes should reflect a natural learning sequence. Implied in this is a kind of developmental sequence in which some outcomes function as the basis for later ones. For example, in the reference which follows, "orientation" is depicted as the third step in a skill continum beginning with perception. This sequence suggests that training should begin at the level of perception and work up to the level or orientation.

QUICK REFERENCE* FOR BLOOM'S THRE

Bloom, et al., suggests sixteen terms that may be used i
clearly and thus improve communication. They are:

Cognitive Domain	(i.e., intellectual processes of the le
Knowledge	recognition and recall of informatic theories, and structures.
Comprehension	interpretation of what has been lea
Application	use of knowledge in new situations.
Synthesis	combining elements into new wholes
Evaluation	judging materials and methods using
Affective Domain	(i.e., emphasis on emotional processes values, and adjustments)
Receiving	passive attention to stimuli (i.e.,
Responding	reacting to stimuli (complying, volu
Valuing	actions consistent with a belief or
Organization	commitment to a set of values (disc
Characterization	total behavior conforming to intern
Psychomotor Domain	(i.e., emphasis on motor behaviors i
Perception	sensitivity to stimulus normally le sensing, etc.).
Preparation	involves readiness to perform (e.g. bodily stance, willingness).
Orientation	knowing and/or deciding an appropri
Pattern	a learned response that is habitual a skill pattern or low error respon
Performance	response that is a complex motor ac skill (e.g., polished behavior, com ease and control).

* This Table reproduced by permission of Dr. Robert A. Le
Special Education, California State College, Fullerton.

QUICK REFERENCE* FOR BLOOM'S THREE DOMAINS

suggests sixteen terms that may be used in describing behavior more
us improve communication. They are:

in (i.e., intellectual processes of the learner)

recognition and recall of information, terms, classes, procedures, theories, and structures.
interpretation of what has been learned.
use of knowledge in new situations.
combining elements into new wholes (induction).
judging materials and methods using standards or criteria.

in (i.e., emphasis on emotional processes such as feelings, interests, values, and adjustments)

passive attention to stimuli (i.e., sensory inputs).
reacting to stimuli (complying, volunteering, etc.).
actions consistent with a belief or value.
commitment to a set of values (discussion, formulating values).
on total behavior conforming to internalized values (e.g., philosophy).

main (i.e., emphasis on motor behaviors involving neuromuscular coordination)

sensitivity to stimulus normally leading to action (e.g., cue, sensing, etc.).
involves readiness to perform (e.g., possesses knowledge, bodily stance, willingness).
knowing and/or deciding an appropriate response to be made.
a learned response that is habitual, smooth, and confident (e.g., a skill pattern or low error response).
response that is a complex motor action involving high degree of skill (e.g., polished behavior, complicated responses, made with ease and control).

roduced by permission of Dr. Robert A. Lemmon, Associate Professor,
ion, California State College, Fullerton.

The authors of the taxonomy point out that thei
educational objectives has historical antecedents exter
philosophy. They also concede that "Modern research or
raises serious questions about the value of these simpl
et al, 1964, p. 7). However, they proceed to justify t
that they reflect the distinctions that teachers and cu
make in the course of classifying educational objective
is in line with common practice, it is assumed that it
efforts of educators to develop curricula. They furthe
that a natural reconciliation between classification of
personality will occur in the context of teacher-studer
system will ultimately lead to a greater power for orga
learning process.

Many professionals applaud the classification o
a pioneering effort to inject a degree of objectivity a
ceptualizing and ordering information in what has been
field of endeavor. The system set forth as guidelines
Development Institute for the Multi-Handicapped at the
Santa Cruz campus reflects many of the same concerns th
of the taxonomy, often referred to as Bloom's Taxonomy.
some important respects. A critical difference arises
Taxonomy is "educational-logical-psychological," in tha
developed in deference to accepted usage for teachers a
Thus, "Insofar as possible, the boundaries between cate
related to the distinctions teachers make in planning o
learning situations. It is possible that teachers make
ogists would not make in classifying or studying human
such distinctions are functional. Yet it can be argued

Theoretical Orientation (cognitive vs. behavioristic) -
A Point of Breakdown in Bloom's Taxonomy

Systems of classification can provide order and
existed previously. But there is an infrequently ackno
i.e., they may lead to premature and unwarranted interp
As a case in point, consider this writer's category of
which the cognitive theorists's use of hypothetical con
and "laterality" is contrasted with the behaviorist's e
An extreme example of the practical implications of suc

ors of the taxonomy point out that their threefold division of
ctives has historical antecedents extending back to ancient Greek
also concede that "Modern research on personality and learning
estions about the value of these simple distinctions." (Krathwohl,
). However, they proceed to justify their domains on the grounds
the distinctions that teachers and curriculum workers typically
se of classifying educational objectives. Therefore, because it
common practice, it is assumed that it will facilitate the ongoing
tors to develop curricula. They further voiced the expectation
conciliation between classification of objectives and theories of
occur in the context of teacher-student interaction and that the
nately lead to a greater power for organizing and controlling the

essionals applaud the classification of educational objectives as
rt to inject a degree of objectivity and provide a basis for con-
ordering information in what has been a confusing and contradictory
. The system set forth as guidelines for the 1970 Curriculum
tute for the Multi-Handicapped at the University of California/
reflects many of the same concerns that motivated the development
often referred to as Bloom's Taxonomy. It does, however, differ in
spects. A critical difference arises from the fact that Bloom's
cational-logical-psychological," in that order of priority. It was
rence to accepted usage for teachers and curriculum specialists.
possible, the boundaries between categories should be closely
istinctions teachers make in planning curricula or in choosing
ns. It is possible that teachers make distinctions which psychol-
make in classifying or studying human behavior." They assume that
are functional. Yet it can be argued that they are not.

ntation (cognitive vs. behavioristic) -
down in Bloom's Taxonomy

f classification can provide order and continuity where only chaos
y. But there is an infrequently acknowledged accompanying hazard,
ad to premature and unwarranted interpretations and value judgments.
t, consider this writer's category of "theoretical framework" in
ve theorists's use of hypothetical constructs such as "body image"
is contrasted with the behaviorist's emphasis on observable events.
e of the practical implications of such distinctions can be seen in

the divergent positions taken by psychoanalysts and beha
ment of phobias. So pervasive are their differences tha
basic nature of the disorder, and, of course, what const
two groups cannot find a common ground for measuring the
programs. To hope for a practical resolution of the dif
groups is like expecting a meaningful result from two te
pletely different sets of rules. An evaluation of this
that theory is an important determinant of how behavior
guides and directs the development of curriculum content

Although in a rather vague fashion, teachers of
basic assumptions and concomitant biases of cognitive an
most do so without being explicitly aware of it. They a
what are, after all, the theoretical biases of their form
theoretical games without knowing the rules or, for that
that it is a game.

To illustrate the practical implications of diff
tation, consider the case of an autistic or retarded chi
in self-injurious headbanging. The influence of theoret
play at the very moment at which one attempts to explain
theorist seeks to explain it in terms of what he guesses
on inside of the child's head. If he is a psychoanalyst
bizarre behavior by suggesting that the child is not rea
punishing someone else whose identity he has taken withi
Another cognitive theorist with a different background m
explanation. Jean Ayres (1968), for example, may look a
that this activity is an outward expression of the child
rium in a disturbed homeostatic balance between excitati
nervous system. Just as a furnace is automatically turn
thermostat set to react at a particular room temperature
ence of some kind of thermostat within the nervous syste
operation of thermostats in heating systems, the idea of
has considerable appeal. It makes sense out of an exce
We may embrace the idea with a sense of relief.

---

* This is admittedly an over-simplification of Ayres' con

RATIONS (Cont'd.)

ions taken by psychoanalysts and behaviorists regarding the treat-
o pervasive are their differences that they even disagree about the
disorder, and, of course, what constitutes a cure. Obviously, the
ind a common ground for measuring the results of their treatment
for a practical resolution of the differences between the two
cting a meaningful result from two teams playing a game with com-
sets of rules. An evaluation of this dispute points up the fact
important determinant of how behavior is viewed. Consequently, it
the development of curriculum content and how results are measured.

a rather vague fashion, teachers of the retarded do adopt the
nd concomitant biases of cognitive and behavioristic theory, yet
being explicitly aware of it. They accept as concrete realities
, the theoretical biases of their former teachers. They are playing
ithout knowing the rules or, for that matter, without even knowing

te the practical implications of differences in theoretical orien-
e case of an autistic or retarded child who consistently engages
eadbanging. The influence of theoretical orientation comes into
ment at which one attempts to explain the behavior. The cognitive
explain it in terms of what he guesses or hypothesizes may be going
ild's head. If he is a psychoanalyst he may make sense of this
suggesting that the child is not really hurting himself, he is
lse whose identity he has taken within himself (introjected).
heorist with a different background may come up with still another
Ayres (1968), for example, may look at the same child and suggest
is an outward expression of the child's attempt to restore equilib-
homeostatic balance between excitation and inhibition within the
st as a furnace is automatically turned on by the action of a
react at a particular room temperature, Ayres postulates the exist-
f thermostat within the nervous system.* Since we understand the
stats in heating systems, the idea of a neurological thermostat
peal. It makes sense out of an exceedingly bizarre phenomenon.
idea with a sense of relief.

an over-simplification of Ayres' concepts.

The behaviorist, and most specifically the
avoids from the very outset the temptation to expl
what is going on inside the head, that is, in term
such explanations pseudo-scientific "will-o'-the-w
need for an explanation. But as guiding principle
tive behavioral technology, he believes them to be
considers the cognitive theorist's measurement tec
indirect measurement of a fictional process can be
which it was based. It is like using an elaborate
The fact that the map provides exact designations
them does not enhance its ultimate usefulness. Ur
of authenticity, it may inspire treasure seekers t
also, say the behaviorists, may a satisfying cogni
phenomenon.

The behaviorist-operant conditioner analyz
observable, objectively measurable events. In per
behavior, he records in detail the environmental c
occurs (Antecedents), he carefully records the chi
what happens to the child once the behavior starts
example, that the child headbangs in a certain roo
day and in the presence of a particular person; th
his head against the wall without drawing blood or
it occurs, his mother rushes up, completely immobi
says, "Please don't hurt yourself." For the behav
behavior resides in the analysis of such sequences
matter of manipulating the contingencies which, in
banging, would probably entail the removal of the
of comforting the child. He may also reward behav
as would be provided by many kinds of play activit

In terms of evaluating his success, the be
first get a base line, a measure of the rate of he
on the average of one hundred times per hour over

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1 Although behaviorism encompasses several relate
that brand of behaviorism developed by B. F. Sk

iorist, and most specifically the proponent of operant conditioning[1], ery outset the temptation to explain the child's behavior in terms of inside the head, that is, in terms of mental phenomena. He considers pseudo-scientific "will-o'-the-wisps" that satisfy the observer's nation. But as guiding principles for the development of an effec- echnology, he believes them to be counterproductive. Further, he nitive theorist's measurement techniques as spurious in that the ent of a fictional process can be no more valid than the fiction on d. It is like using an elaborate map to locate mythical lost treasure. map provides exact designations of locations and distances between ance its ultimate usefulness. Unfortunately, if the map has the look it may inspire treasure seekers to years of fruitless activity. So aviorists, may a satisfying cognitive explanation of a behavioral

iorist-operant conditioner analyzes the child's behavior in terms of tively measurable events. In performing a functional analysis of the rds in detail the environmental context in which the head banging ts)., he carefully records the child's exact behavior (Behavior) and he child once the behavior starts (Consequences). He may find, for child headbangs in a certain room of the house, at a certain time of esence of a particular person; that he lightly hits the right side of the wall without drawing blood or causing a bruise; that as soon as ther rushes up, completely immobilizes him and in a pleading voice 't hurt yourself." For the behaviorist, the explanation of the in the analysis of such sequences and contingencies. Control is a ating the contingencies which, in this case of noninjurious head- obably entail the removal of the reinforcing (rewarding) consequence child. He may also reward behavior incompatible with headbanging-- ded by many kinds of play activity.

of evaluating his success, the behaviorist-operant conditioner would line, a measure of the rate of headbanging, e.g., the child may bang one hundred times per hour over a 24-hour period. He would then

iorism encompasses several related approaches, the writer emphasizes behaviorism developed by B. F. Skinner and known as operant conditioning.

carry cut the behavioral program and recheck the
not significantly decrease, he would adjudge the
further into the influence of environmental event
course of the initial functional analysis and wou

What if Ayres, guided by her belief in th
thermostat, located a mass of neural tissue that
a control mechanism? Further, let us suppose tha
tissue could be detected by means of an extremely
believed that peaks of electrical activity indica
Because such "inside" activity could be measured
iorist could then incorporate it into his functic
were shown to be reliably related to such peaks c
this kind of data as contributing to the understa
Ayres could then argue that the bias developing c
vated and guided the continuing search for an act
be right. A bias that may lead into a blind alle
operant conditioner, however, believes that hypot
blind alleys--to the development of elaborate the
approaches that are closed, self-validating syste
rather than corrected.

The cognitive theorist concedes that the
with a high degree of efficiency. But the cogni
iorist accomplishes such performances without re
which learning takes place, he violates these pr
a short-term goal at the expense of the long-ter
structures. The cognitivist considers such perf
Kephart's (1960) terms, "splinter skills," that
he would remind the behaviorist that animals can
formances such as "reading" which suggests a lev
illusory--such is the nature of "splinter skills
that the "splinter skill" argument must be backed
is generally lacking. And he would aver that si
behaviors happen to follow the sequences incorpo
does not necessarily mean that they need be taug
would add that a slavish adherence to such seque
essary and unproductive training activities.

DERATIONS (Cont'd.)

avioral program and recheck the rate of the behavior. If the rate did decrease, he would adjudge the program a failure. He would then look influence of environmental events that he may have overlooked in the tial functional analysis and would then seek to control these events.

yres, guided by her belief in the physical existence of a neurological ed a mass of neural tissue that she believed actually contained such sm? Further, let us suppose that electrical activity coming from this etected by means of an extremely sensitive apparatus and that Ayres ks of electrical activity indicated that the thermostat was "on." ide" activity could be measured in an objective fashion, the behav- incorporate it into his functional analysis. If then, the headbanging reliably related to such peaks of elctrical activity, he would consider as contributing to the understanding of the phenomenon of headbanging. argue that the bias developing out of her hypothetical construct moti- the continuing search for an actual physical structure. And she would that may lead into a blind alley may also lead to discovery. The er, however, believes that hypothetical constructs more often lead to the development of elaborate theoretical structures and therapeutic re closed, self-validating systems in which errors are perpetuated cted.

itive theorist concedes that the behaviorist can train many behaviors e of efficiency. But the cognitivist argues that because the behav- es such performances without regard for the underlying processes by kes place, he violates these processes. The behaviorist may achieve at the expense of the long-term development of more mature cognitive cognitivist considers such performances isolated "tricks" or, in terms, "splinter skills," that lack generalized significance. And he behaviorist that animals can be taught to carry out complex per- s "reading" which suggests a level of understanding that is only s the nature of "splinter skills." The behaviorist would counter r skill" argument must be backed by experimental proof, proof that king. And he would aver that simply because childrens' emeging to follow the sequences incorporated into developmental tests, this rily mean that they need be taught in such sequences. The behaviorist slavish adherence to such sequences may, in fact, involve many unnec- ductive training activities.

The objections of the cognitive theorist exte
ever. On esthetic, philosophical and ethical grounds
techniques as crassly manipulative, as mechanistic an
washing" that renders a subject less human and more s
manipulation. Further, he may believe that behaviori
development of voluntary behavior, spontaneity, indiv
free will. Therefore, it can be seen that the cognit
operant conditioning is much more than on a scientifi
issues" regarding his basic value system and his conv
meaningful in human existence, in short, his philosop

This writer believes that the mutual hostilit
cognitive groups is counterproductive to scientific p
groups would probably disagree, he believes that ever
effort to synthesize and integrate the two approaches
achieve in his book Itard, Seguin and Kephart: Senso
Interpretation.[1]

As an example of how theoretical consideratio
ulum productions of the third Santa Cruz Conference,
on pages 67 to 80. As noted in the Editor's comments
program involves a number of features that are based
reflecting a cognitive interpretation of the learning
assumptions of this kind have become so engrained in
implicitly assume the status of facts. The result is
these "facts" are incorporated as seemingly necessary
training approach based on a behavioristic strategy m
shortcut that could greatly curtail the time and expe
skill. On the other hand, certain incidental benefit
ficed in the course of taking such a shortcut. Unfor
perspective, the teacher may remain unaware of the ver
possibilities. Nor does it seem likely that Bloom's
accepted usage, would lead to the detection and clari

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1 Published by Charles E. Merrill, 1971.

ns of the cognitive theorist extend to other considerations, how-
philosophical and ethical grounds he rejects the behaviorist's
manipulative, as mechanistic and detached, as a form of "brain-
s a subject less human and more succeptible to authoritarian
er, he may believe that behavioristic techniques subvert the
tary behavior, spontaneity, individual choice, and, ultimately,
e, it can be seen that the cognitive theorist's rejection of
is much more than on a scientific basis. It involves "gut
s basic value system and his convictions regarding what is
existence, in short, his philosophy of life.

believes that the mutual hostility between the behavioristic and
counterproductive to scientific progress. Further, although both
disagree, he believes that everyone stands to benefit from an
and integrate the two approaches. This he has attempted to
Itard, Seguin and Kephart: Sensory Education - A Learning

e of how theoretical considerations are reflected in the curric-
the third Santa Cruz Conference, review the "nose blowing" program
As noted in the Editor's comments, this seemingly straightforward
umber of features that are based on theoretical assumptions
e interpretation of the learning process. The problem is that
kind have become so engrained in educational folklore that they
e status of facts. The result is that procedures reflecting
orporated as seemingly necessary aspects of a program. Yet a
sed on a behavioristic strategy may result in a programmatic
greatly curtail the time and expense involved in teaching this
hand, certain incidental benefits of importance may be sacri-
of taking such a shortcut. Unfortunately, lacking a theoretical
her may remain unaware of the very existence of such alternative
does it seem likely that Bloom's Taxonomy, which caters to
d lead to the detection and clarification of such possibilities.

les E. Merrill, 1971.

Bloom's Taxonomy and Educational Objectives fo

Bloom's Taxonomy is, after all, a class to meet the needs of testing specialists deali mentally retarded. That explains the immediate cognitive domain and the misgivings and result the affective and psychomotor domains. It migh construct the taxonomy began at the wrong end This point may become clear in reference to th catagory under "receiving" which is in the affe is in the psychomotor domain. Both are related and arousal." Yet where measurement of awarene Taxonomy admit to grave difficulties (see Handi The writers cite the example of an art teacher awareness of the effect of color, form, design his evolving sensitivity to such variables, th at a series of paintings and describe them. S the student's reports, he cannot directly sugge student fails to mention such characteristics. entirely possible that he was aware of them wh not verbalize them. He even may have been awa

Happily, at the level of profound ment measure awareness (activation and arousal) wit vent the problems noted above. Not only that, additional advantage of being "program free"-- of any and every program irrespective of conte of directly comparing the result of say, music creative dance. One such measure is based on repetitive behavior such as body rocking[1] (Kau peutic program fails to reduce the frequency o of extremely limited value, whatever its conte proposed by the authors of the Taxonomy even a this simple and objective measure for the prof

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1 Activation and arousal can also be measured psychophysiological techniques.

and Educational Objectives for the Mentally Retarded

Taxonomy is, after all, a classification system designed originally
s of testing specialists dealing with college students, not the
ed. That explains the immediate emphasis placed on developing the
and the misgivings and resultant delays in developing systems for
nd psychomotor domains. It might even be argued that efforts to
axonomy began at the wrong end of the continuum of intelligence.
become clear in reference to the objectives of "awareness," a sub-
receiving" which is in the affective domain, and "orientation" which
notor domain. Both are related to the present category of "activation
et where measurement of awareness is concerned, the authors of the
o grave difficulties (see Handbook II: Affective Domain, pp. 101-102).
e the example of an art teacher who seeks to develop the student's
e effect of color, form, design, etc., in art media. To evaluate
nsitivity to such variables, the teacher may have the student look
paintings and describe them. Since he must carefully avoid biasing
ports, he cannot directly suggest what to look for. But what if the
o mention such characteristics. As the authors point out, "It is
le that he was aware of them when looking at the paintings but did
hem. He even may have been aware of them at a semiconscious level."

, at the level of profound mental retardation, it is possible to
ss (activation and arousal) with techniques that completely circum-
s noted above. Not only that, but some of these techniques have the
ntage of being "program free"--they can be applied to the measurement
y program irrespective of content. This extends to the possibility
paring the result of say, music therapy with finger painting or
One such measure is based on the occurrence of objectively recordable
vior such as body rocking[1] (Kaufman and Levitt, 1965). If a thera-
fails to reduce the frequency of this behavior, it can be considered
mited value, whatever its content. None of the measurement procedures
authors of the Taxonomy even approach the generalized significance of
objective measure for the profoundly retarded.

nd arousal can also be measured by means of simple, objective,
logical techniques.

In the present classification system a seri
that are, in some respects, analogous to the behavi
Bloom's Taxonomy. But unlike the objectives of the
heterogeneous and reflect an inferred developmental
extent. Crisis problems, for example, reflect the
considerations while "theoretical framework" reflec
tions. No claim is made for comprehensiveness of c
only tentative. The rationale for some of these ca
more comprehensive and developmentally relevant fas
and Kephart: Sensory Education - A Learning Interp

Santa Cruz System for Evaluating Educational Object for the Severely Retarded

To illustrate the application of the preser
evaluation of behavior objectives for the severely
editor has applied the series of eight questions to
"Angels in the Snow" (hereinafter referred to as A.
lying on his back, learns to move his legs and arms
specified by the teacher. For younger, more impair
to rub the child's limbs to help him identify them.
creasingly aware of their being a part of him and t
voluntary effort.

The first question or criterion by means of
item is in terms of Crisis Problems. Thus, prior t
a new child enters a class we must be able to conta
Educational potential is of absolutely no importanc
intolerable, if he cannot be brought under verbal c
to attend. We assert that if these goals are not r
program should probably be judged a failure.

A.S. was not designed as a direct approach
Yet it does, incidentally, influence them. Clearly
movement patterns specified by the teacher in respo
great deal of control is being exerted over his bel
some control over his own behavior. Also, he is a
responding to verbal instructions. From a behavio
apparent that the child is receiving much social r

esent classification system a series of questions were developed
respects, analogous to the behavioral objectives set forth in
But unlike the objectives of the Taxonomy, they are much more
reflect an inferred developmental sequence to only a very limited
roblems, for example, reflect the most practical and pragmatic of
ile "theoretical framework" reflects relatively abstract considera-
is made for comprehensiveness of coverage and they are set forth as
The rationale for some of these categories is explained in a much
e and developmentally relevant fashion in the book Itard, Seguin
sory Education - A Learning Interpretation.

for Evaluating Educational Objectives
Retarded

rate the application of the present classification system to the
avior objectives for the severely and profoundly retarded, the
d the series of eight questions to Kephart's training activity,
ow" (hereinafter referred to as A.S.). In this activity the child,
, learns to move his legs and arms through various movement patterns
teacher. For younger, more impaired children, the teacher may need
s limbs to help him identify them. In this manner he becomes in-
of their being a part of him and that they can be moved through

question or criterion by means of which we evaluate this training
of Crisis Problems. Thus, prior to all other considerations, when
s a class we must be able to contain him within the facility.
tial is of absolutely no importance if his behavior is socially
e cannot be brought under verbal control or he cannot be taught
sert that if these goals are not met within four months, then the
obably be judged a failure.

not designed as a direct approach to dealing with crisis problems.
dentally, influence them. Clearly, if a child learns to carry out
specified by the teacher in response to her verbal commands, a
trol is being exerted over his behavior. He, in turn, acquires
his own behavior. Also, he is attending to the teacher and
bal instructions. From a behavioristic point of view, it is
child is receiving much social reinforcement for activities

incompatible with problem behavior. The technique
one directly attacking the problem behavior. Patte
have written a programmed text for parents. It out
from operant conditioning, for dealing with their c
in terms of the question of crisis problems, the th
approach is much less important than its efficacy f
control within a reasonable period of time.

It is essential to provide an objective mea
success in achieving behavioral control. The evalu
recordable, measurable events rather than inferred
techniques need not be complicated. For example, a
developed by observing the child for a minute at th
banging occurs during the minute interval, it is so
observations over a period of several days can prov
measurement at the end of four months will indicate
been made.

A second question deals with the problem of
severely impaired individuals "turned on" to the ou
children become "turned off" to anything but self-s
that of the blind child who sits rocking back and f
attempt to disrupt this activity and establish cont
warding us off. He provides his own sources of sti
than what we offer in the course of limited interac

With the concept of activation and arousal
free approach to evaluating the relative effectiver
evolved. It would entail simply recording the numbe
behavior on one occasion and returning a few months
still rocking, the educational program, irrespectiv
a failure. At this level, whatever gets the child
good. Once he is "hooked," the program may remain
depending upon its evolving functional significance

Once again, A.S. was not designed to deal
it has been found highly effective in activating yo

CONSIDERATIONS (Cont'd.)

with problem behavior. The technique may not be as rapid or efficient as attacking the problem behavior. Patterson and Gullion (1968), for example, a programmed text for parents. It outlines a direct approach, derived conditioning, for dealing with their children's behavior problems. Yet, the question of crisis problems, the theoretical basis of a successful much less important than its efficacy for obtaining the necessary behavioral in a reasonable period of time.

s essential to provide an objective means of evaluating the extent of one's chieving behavioral control. The evaluation should be based on observable, measurable events rather than inferred psychological states. Yet the eed not be complicated. For example, a base line for headbanging may be observing the child for a minute at the beginning of each hour. If head- rs during the minute interval, it is scored. An accumulation of such over a period of several days can provide an adequate base line. Repeated at the end of four months will indicate whether significant progress has

cond question deals with the problem of Activation and Arousal, of getting aired individuals "turned on" to the outside world. All too often such ome "turned off" to anything but self-stimulation. A familiar example is blind child who sits rocking back and forth hour after hour. When we isrupt this activity and establish contact with him, he may respond by ff. He provides his own sources of stimulation, sources more satisfying offer in the course of limited interactions with him.

the concept of activation and arousal as a point of departure, a program h to evaluating the relative effectiveness of various programs can be would entail simply recording the number of children engaging in rocking one occasion and returning a few months later to reevaluate. If they are g, the educational program, irrespective of its content, can be adjudged At this level, whatever gets the child "hooked" on the environment is he is "hooked," the program may remain important or may become trivial on its evolving functional significance.

again, A.S. was not designed to deal expressly with this problem. Yet found highly effective in activating younger, more impaired children who

require much tactile stimulation to learn the necessary
withdrawn, self-stimulating children may become more res
in the world of people and things as the result of such
incidental payoff of this item in Kephart's training.

A third variable is that of Modeling and Imitati
behavior modification group has emphasized the tremendou
of imitation training (see Baer, et al, 1967 and Lovaas,
child becomes generally imitative, it is no longer neces
separately. He learns through imitation, a process that
sically) reinforcing. Were it not for the generalized i
speech as we know it would be prohibitively difficult to
the necessary individual speech sounds would be a ponder
is such an important variable, one should assess the ext
in a training activity and how much the activity, in tur

Kephart did not mention imitation training in co
observation of the teaching process reveals that the tea
strate a movement, e.g., raising the arm, in the course
do so. While the amount of such imitation occurring dur
instruction has not been formally assessed, it seems mos
And to the extent that it does occur and the learned pro
generalized, it may lend itself to facilitating the acqu
when the child learns to shape his lips to make the ō so
teacher.

A fourth question deals with assessing a technic
Framework. Though many people spurn theoretical conside
or impractical, theory does, in fact, importantly contri
interpret behavior and, further, how we train or modify
theories generate highly contradictory and incompatible
example, the motor training program of the Doman-Delacat
requires the child to pass through a sequence equivalent
lation of the motor patterns through which human antecec
of evolution. A case in point is that of a child with l
tioning who would not be permitted to practice walking u
crawling until he passed through the amphibian stage of
stands in marked contrast with Kephart's training for mo
ization. Rather than rigidly prescribed "patterning," l
changing series of activities that require novel adaptat

to learn the necessary movements. Even passive,
ren may become more responsive to and interested
as the result of such experience--another
Kephart's training.

of Modeling and Imitation. In recent years the
mphasized the tremendously facilitating effect
et al, 1967 and Lovaas, et al, 1966). Once the
, it is no longer necessary to teach each new skill
itation, a process that he finds naturally (intrin-
t for the generalized imitativeness of the infant,
hibitively difficult to train. To "shape" each of
ounds would be a ponderous task. Since imitation
e should assess the extent to which it is involved
ch the activity, in turn, develops it.

mitation training in connection with A.S. However,
ss reveals that the teacher may frequently demon-
the arm, in the course of instructing the child to
imitation occurring during the course of A.S.
assessed, it seems most likely that it does occur.
cur and the learned propensity to imitate becomes
o facilitating the acquisition of other skills, as
s lips to make the ō sound in imitation of his

ith assessing a technique within a Theoretical
urn theoretical considerations as "ivory tower"
act, importantly contribute to how we view and
how we train or modify it. Sometimes different
ctory and incompatible courses of action. For
am of the Doman-Delacato program (Delacato, 1959)
h a sequence equivalent to a Darwinian recapitu-
ugh which human antecedents passed in the process
that of a child with highly impaired motor func-
d to practice walking or even cross-pattern
the amphibian stage of crawling. This program
phart's training for motor vairability and general-
scribed "patterning," Kephart provides a continuously
t require novel adaptations and adjustments on the

part of the child. As Bateman perceptively noted, "Al
both Delacato and Kephart contain a large motor expres
this superficial resemblance reflects quite different
rationale," (1964). Unfortunately, many teachers are
resemblance" and feel that in selecting one or the oth
between approximately equivalent alternatives. This i

The theoretical basis of A.S. is related to the
body image. Both are inferred internal processes or hy
difficult to assess directly in terms of observable, me
tute mental phenomena of a kind that people in operant
No one has ever seen laterality or body image and the
measuring them often involve extraneous factors that ob
the element of artistic ability in figure drawing as a
follows that theoretical orientation influences what or
cessful training. Fallacies in this area are numerous
child's "figure-ground" perception on the Frostig test
similar to test items, (Frostig and Horne, 1964). After
is readministered, and the child attains a higher score
as evidence of strengthened figure-ground perception.
another demonstration of the fact that children can be
test? And if a child who has taken the Frostig program
instruction than previously, does the improvement have
ground perception or is it, more simply, a function of
increased frustration tolerance? On the other hand, if
the child's willingness to remain seated, it might be w
very restricted purpose, one markedly different from th
for a person to do the right thing despite a weak or qu
doing it. On the other hand, theory can also place one
of a kind expressed in Delacato's strictures against ex
with a reading disability.

In Kephart's framework, A.S. is said to promote
turn, is the basis of directionality, an awareness of d
ronment. Therefore, laterality training is believed to
directionality. Yet at this point, we lack solid scien
in fact, occur. We must, therefore, accept on faith Ke
internal changes are taking place as the result of trai
ioral payoff will eventually appear. Research evidence
Shotwell, 1969) is available to support the claim that
But, that it occurs as a function of the developmental
Kephart, remains to be demonstrated.

TIONS (Cont'd.)

s Bateman perceptively noted, "Although the remedial programs of
hart contain a large motor expression or motor activity component,
emblance reflects quite different theoretical formulations and
Unfortunately, many teachers are deceived by the "superficial
that in selecting one or the other program they are choosing
equivalent alternatives. This is not the case.

cal basis of A.S. is related to the notions of "laterality" and
e inferred internal processes or hypothetical constructs that are
directly in terms of observable, measurable events. They consti-
a of a kind that people in operant conditioning totally reject.
laterality or body image and the traditional techniques for
involve extraneous factors that obscure interpretation such as
tic ability in figure drawing as a test of body image. It also
ical orientation influences what one accepts as evidence of suc-
allacies in this area are numerous, e.g., a teacher evaluates a
nd" perception on the Frostig test and then trains with materials
s (Frostig and Horne, 1964). After a course of training the test
nd the child attains a higher score which the teacher interprets
gthened figure-ground perception. Or is it anything more than just
n of the fact that children can be trained to take a particular
d who has taken the Frostig program responds better to reading
viously, does the improvement have anything to do with figure-
is it, more simply, a function of a gross attention factor or
n tolerance? On the other hand, if the Frostig program enhances
ess to remain seated, it might be worth retaining, albeit for a
ose, one markedly different from that "advertised." It is possible
he right thing despite a weak or questionable theoretical basis for
her hand, theory can also place one in a procedural straight-jacket
in Delacato's strictures against exposure to music for the child
ility.

framework, A.S. is said to promote laterality. Laterality, in
f directionality, an awareness of direction in the external envi-
laterality training is believed to facilitate the acquisition of
at this point, we lack solid scientific evidence that this does,
must, therefore, accept on faith Kephart's inference that certain
e taking place as the result of training and that a direct behav-
ventually appear. Research evidence (Edgar, Ball, McIntyre &
available to support the claim that a practical payoff accrues.
as a function of the developmental processes conceptualized by
b onstrated.

A fifth question deals with the time-honored problem
Training a child in one task or at one level may facilitate
on another task or another level. For example, mastery of
a bicycle greatly facilitates learning to maintain equilibri
negative transfer can also occur, e.g., a skilled automobile
periences a temporary loss of competence in the course of ac
of driving on the right side of the road in the United State
side training has a negative carry-over to driving on Americ

Although the adherents of operant conditioning reje
and confine themselves to an objective level of observation
often show a curious lack of concern for transfer effects.
has greatly facilitated Montessori training through his Pre
an impressive accomplishment. Yet he did this without cons
of Montessori instruction for later learning. However, it
(Ball & Campbell, 1970) that Montessori cylinder block inst
an intellectual acquisition of the concept of conservation
liquid transfer problem.

A sixth variable relates Subjective Factors, i.e.,
esthetic preferences, ethical orientation and personality s
and ability to utilize a particular technique. While behav
most readily to give rise to conflicts on this level, subje
any approach. With A.S. the teacher must directly exert co
the child's movements. She must be actively willing to ove
from rigidity or negativism. Tender Loving Care must be te
with children who are often quite physically handicapped, p
Quite often it goes against the grain of many teachers to d
dren with sufficient firmness to work through such initial
hand, there are those so habitually authoritarian that they
their approach to the child according to the changing circu
situation.

Values also enter the picture in terms of the end p
efforts, i.e., the kind of person one hopes to develop thro
ulum. For example, is behavioral control established at th
A recent review of Ayllon and Azrin's already classic work
the issue that nowhere was provision made for reinforcing s
emphasis on spontaneity reflects a value judgment. Is it a
"adjustment?" Should we attempt to attain it in retarded p

estion deals with the time-honored problem of Transfer of Training. n one task or at one level may facilitate the acquisition of skill another level. For example, mastery of the problem of balance on facilitates learning to maintain equilibrium on a motorcycle. But can also occur, e.g., a skilled automobile driver from England exary loss of competence in the course of adjusting to the demands right side of the road in the United States. His experience in left a negative carry-over to driving on American roads.

he adherents of operant conditioning reject hypothetical constructs lves to an objective level of observation and assessment, they us lack of concern for transfer effects. Lindsley, for example, tated Montessori training through his Precision Teaching approach-- mplishment. Yet he did this without considering the implications ruction for later learning. However, it has recently been shown 1970) that Montessori cylinder block instruction may actually impede quisition of the concept of conservation as measured by Piaget's oblem.

riable relates Subjective Factors, i.e., the teacher's value system, es, ethical orientation and personality style, to her willingness lize a particular technique. While behavioristic approaches seem ve rise to conflicts on this level, subjective factors can affect h A.S. the teacher must directly exert considerable control over nts. She must be actively willing to overcome resistance arising egativism. Tender Loving Care must be tempered with a firm approach are often quite physically handicapped, passive and "helpless." s against the grain of many teachers to deal with handicapped chilnt firmness to work through such initial rigidity. On the other ose so habitually authoritarian that they cannot temper or modify the child according to the changing circumstances of the training

o enter the picture in terms of the end product of one's training kind of person one hopes to develop through a particular curric-, is behavioral control established at the expense of spontaneity? Ayllon and Azrin's already classic work on token economy raised here was provision made for reinforcing spontaneous behavior. Yet neity reflects a value judgment. Is it an ingredient of optimal uld we attempt to attain it in retarded persons?

THEORETICAL CONSIDERATIONS (Cont'd.)

A seventh variable relates to the developmen
diverse training approaches could be related and int
common-denominator. It represents an attempt to ide
ning through highly diverse and seemingly contradict
book Itard, Seguin, and Kephart, drawing on the Mode
very direct relationship between techniques develope
1850 and recent developments in the field of operant
strated. Also, with the model of escape-avoidance c
departure, direct relationships between historic (It
porary (Lovaas' and Kephart's) training techniques a
oncilable operant conditioning (exemplified by Lovaa
by Kephart) approaches have been shown. The field c
by exaggerated theoretical differences and neologist
in need of parsimonious organizing principles highli
rather than difference.

An awareness of the multiple implications of
in more sophisticated programming. For example, ins
tive communication (understanding speech) through a
and oriented to this single objective, why not teach
Colwell (1965) self-help skill program? In so doing
one stone and come out ahead in regard to cost-benef

Descriptive categories such as self-help ski
sensory-motor skills and communication are completel
is justifiable on the grounds of convenience and uti
as sensory-motor, but it is also personal-social, ar
receptive communication is also involved. A specifi
this fact can be found in the results of a study by
young, moderately retarded children were trained wit
Sensory-Motor Training program. As expected, the exp
icantly on the Motor Skill Schedule of the Gesell. I
noted on the Language and Personal-Social Schedules
of training.

The eighth question deals with the possibili
or activity within the framework of behavioristic (
When applied to A.S., this might involve the utiliza
forcers than Kephart customarily employs. For exam

NSIDERATIONS (Cont'd.)

nth variable relates to the development of Models whereby extremely
ng approaches could be related and interpreted in terms of some lowest-
ator. It represents an attempt to identify threads of continuity run-
ighly diverse and seemingly contradictory training systems. In the
guin, and Kephart, drawing on the Model of Generalized Imitation, a
lationship between techniques developed by Itard and Seguin prior to
t developments in the field of operant conditioning has been demon-
, with the model of escape-avoidance conditioning as a point of
ect relationships between historic (Itard's and Seguin's) and contem-
' and Kephart's) training techniques and between the seemingly irrec-
ant conditioning (exemplified by Lovaas) and cognitive (exemplified
proaches have been shown. The field of special education, handicapped
theoretical differences and neologistic terminologies, is desperately
simonious organizing principles highlighting areas of commonality
fference.

reness of the multiple implications of any one technique can result
ticated programming. For example, instead of directly training recep-
tion (understanding speech) through a program specifically designed
o this single objective, why not teach it incidental to the Bensberg-
self-help skill program? In so doing one might kill two birds with
come out ahead in regard to cost-benefit analysis.

ptive categories such as self-help skills, personal-social behavior,
skills and communication are completely arbitrary although their use
on the grounds of convenience and utility. A.S. might be classified
or, but it is also personal-social, and it could hardly be denied that
unication is also involved. A specific experimental demonstration of
be found in the results of a study by Edgar, et al (1969) in which
ely retarded children were trained with an adaptation of Kephart's
raining program. As expected, the experimental group gained signif-
Motor Skill Schedule of the Gesell. But significant gains were also
anguage and Personal-Social Schedules, areas that were not the focus

ghth question deals with the possibilities of restructuring a program
thin the framework of behavioristic (operant conditioning) methodology.
A.S., this might involve the utilization of a wider range of rein-
ephart customarily employs. For example, learning might be accelerated

in an unresponsive child by introducing food reinforcement
by successive approximations. On the other hand, objectio
the utility and advisability of such adaptations. Kephart
be taught within an operant conditioning framework but arg
probably just as efficient. Also, he feels his own approa
to the development of voluntary control in the child. The
settled by empirical studies. Yet they merit careful cons

d by introducing food reinforcement and teaching the activity
tions. On the other hand, objections might be raised regarding
ility of such adaptations. Kephart agrees that such tasks can
rant conditioning framework but argues that his own method is
ent. Also, he feels his own approach lends itself more readily
oluntary control in the child. These questions can only be
udies. Yet they merit careful consideration.

A Format for Reviewing Criterion Variables

"Communication" is a term commonly
objective. In this conference, participant
term, e.g., Communication (Word Associatio
They then proceeded to develop relevant pr
tional need delineated by each subcategory.
of time, money and effort, it is important
with communication. And to the extent tha
communication skills, they should be carefu
label and tease out the practical implicati

In the following table, some progra
approaches to the training of receptive co
is an example of a direct, behavioristic a
mally labeled as such. The Bensberg-Colwe
gram primarily devised for another purpose
an important incidental payoff for one pha
This fact takes on great significance in p
the profound level of retardation priority
of commands so that the child can be brough
tions). Since the capacity for symbolizat
to talk is less critical than for the mild
under verbal control, he urgently needs to
dressing, feeding and toileting. And sinc
under verbal control while focusing on sel
simultaneously with considerable economy o

ng Criterion Variables in Curriculum Development

on" is a term commonly used by teachers to define an instructional
conference, participants defined various subcategories of this
ation (Word Association) and Communication (Receptive Understanding).
to develop relevant programs dealing directly with the instruc-
ed by each subcategory. However, from the standpoint of economy
ffort, it is important to note that many programs indirectly deal
And to the extent that they can be used effectively to promote
, they should be carefully evaluated. We must look beyond the
the practical implications of what is actually taught to the child.

wing table, some programs that constitute both direct and indirect
aining of receptive communication are classified. Lovaas' program
irect, behavioristic approach to language training and it is for-
h. The Bensberg-Colwell program is an excellent example of a pro-
ed for another purpose, that is, self-help skill training, but with
tal payoff for one phase of communication, i.e., receptive speech.
reat significance in planning for children below IQ 20. Thus, at
f retardation priority should be given to developing comprehension
the child can be brought under verbal control (follow verbal instruc-
apacity for symbolization is limited, the development of the ability
ical than for the mildly retarded. Along with the need to bring him
, he urgently needs to acquire basic self-help skills, especially
d toileting. And since the Bensberg-Colwell program places the child
while focusing on self-help skills, it achieves both objectives
considerable economy of time, effort and money.

Table

Training Approaches

Direct			Indirect (Incidental Result)		
Theoretical Orientation			Theoretical Orientation		
Behavioristic	Cognitive	Eclectic	Behavioristic	Cognitive	Eclectic
Lovaas Burl Gray		Peabody	Bensberg-Colwell (Self-Help Skills)	Kephart Sensory-Motor Training	

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